

The background of the portfolio cover is divided into three geometric sections: a white triangle in the top right, a light blue trapezoid on the left, and a light olive green triangle on the right. A white rectangular box is positioned in the lower half, containing the name and institutional information.

**SCOTT**  
**AXEL**

**PENNSYLVANIA STATE UNIVERSITY**  
**STUCKEMAN SCHOOL OF ARCHITECTURE**  
**CLASS OF 2016**

**PORTFOLIO [2014]**

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This portfolio documents the process of my architectural education at Pennsylvania State University. The following work encompasses first through fourth year work and major professional work at architecture firms.

The development of my projects from first through fourth year is evident in the complexity, clarity, and quality of the projects below. My first year I tinkered around, trying to find my strengths and weaknesses.

I learned many construction and drawing techniques that I applied to my projects first year.

Second year, I excelled in digital modeling on programs such as Revit, Sketchup, and Illustrator. I used these to further my fascination with heavily grounded architecture.

Third year I devoted more time to develop my abilities in Rhino, Photoshop, and physical modeling. My projects became simpler to focus on more details.

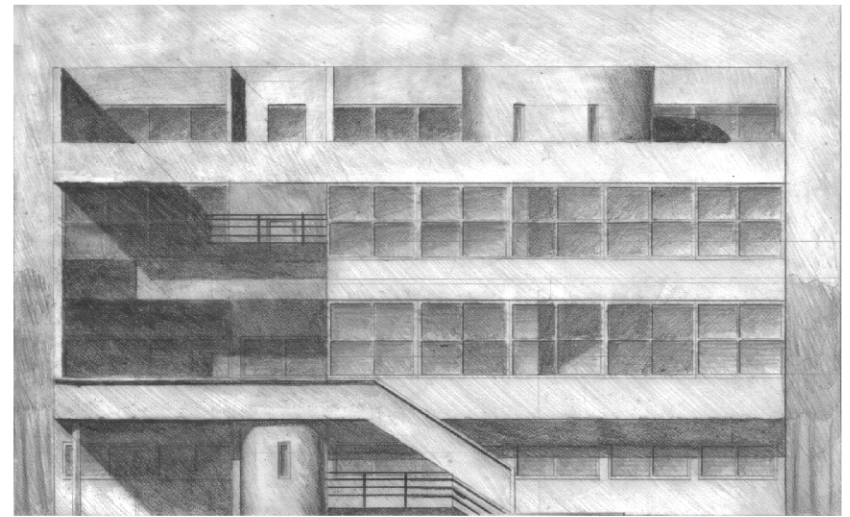
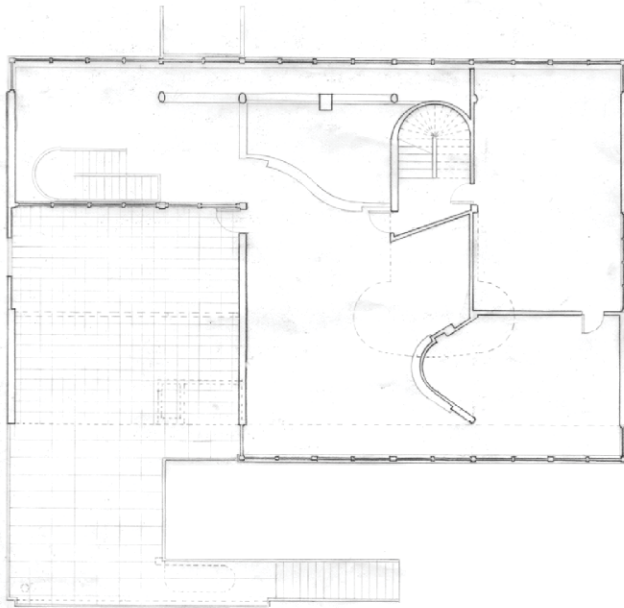
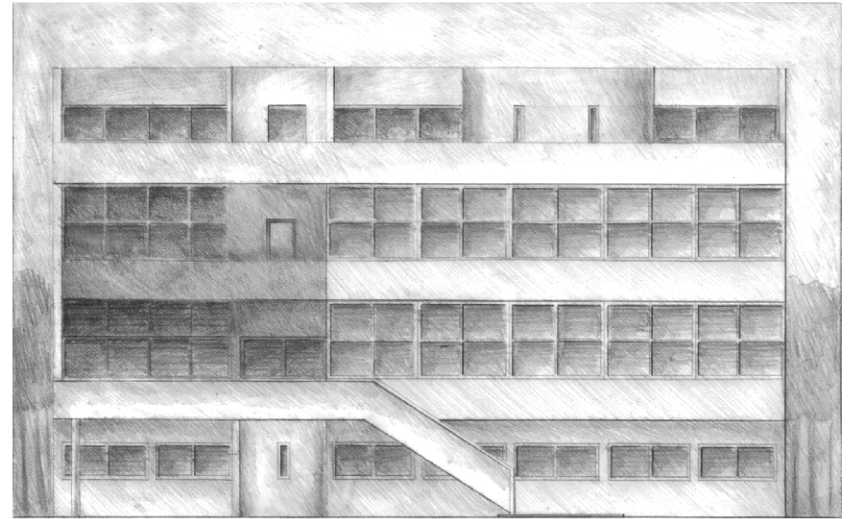
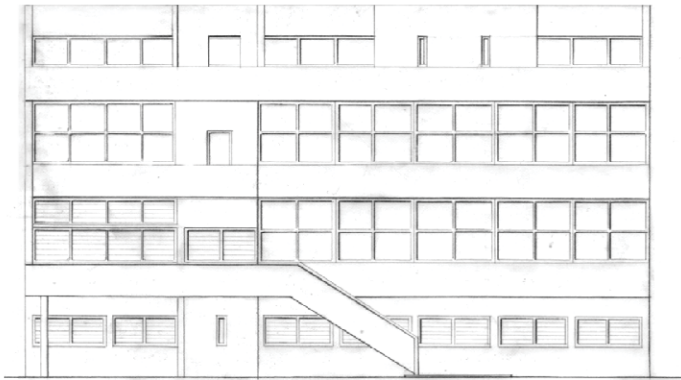
During the summers at firms I started to understand the tough process necessary to actually complete a project and how to coordinate between many different companies and stages.

My fourth year I have found a fascination with material specification, detail in simplistic structures and complex spaces, and a landscape connection to projects.

I am proud of my work and cannot wait for my next step. I hope you enjoy my work too.

A handwritten signature in black ink, appearing to read "Scott Axel", with a stylized, flowing script.

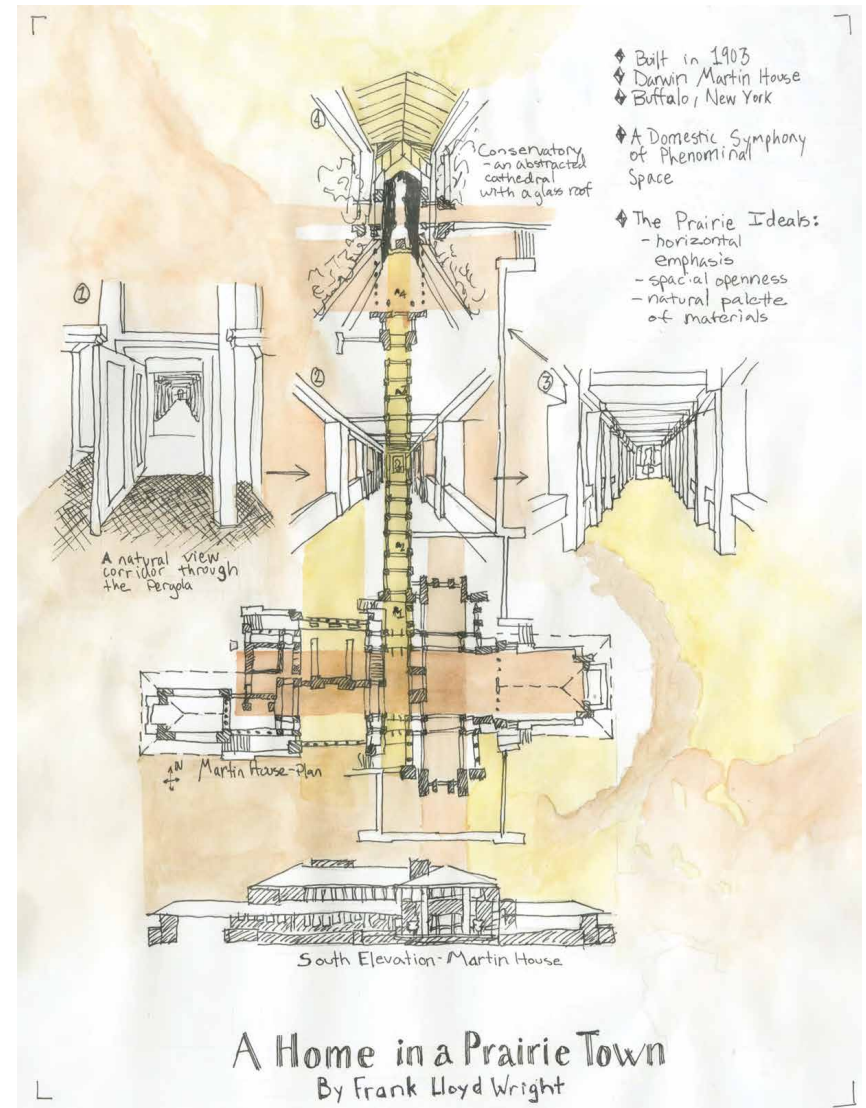
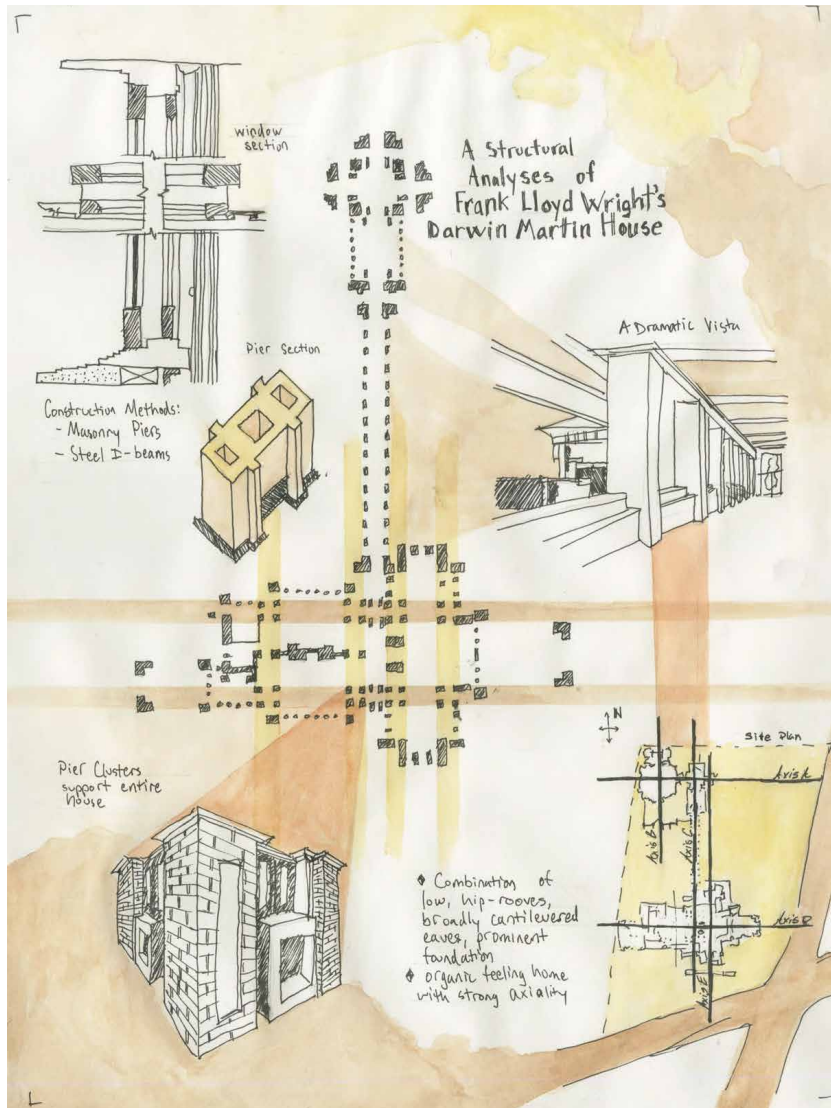
Scott Axel



Villa Stein de Monzie - hand drawing examining light, shade, and shadow - Professor Jamie Cooper - Fall 2011 - Arch 121

This two week project was towards the end of the semester in which the techniques of line weights, shade, shadows, and general rendering were taught.





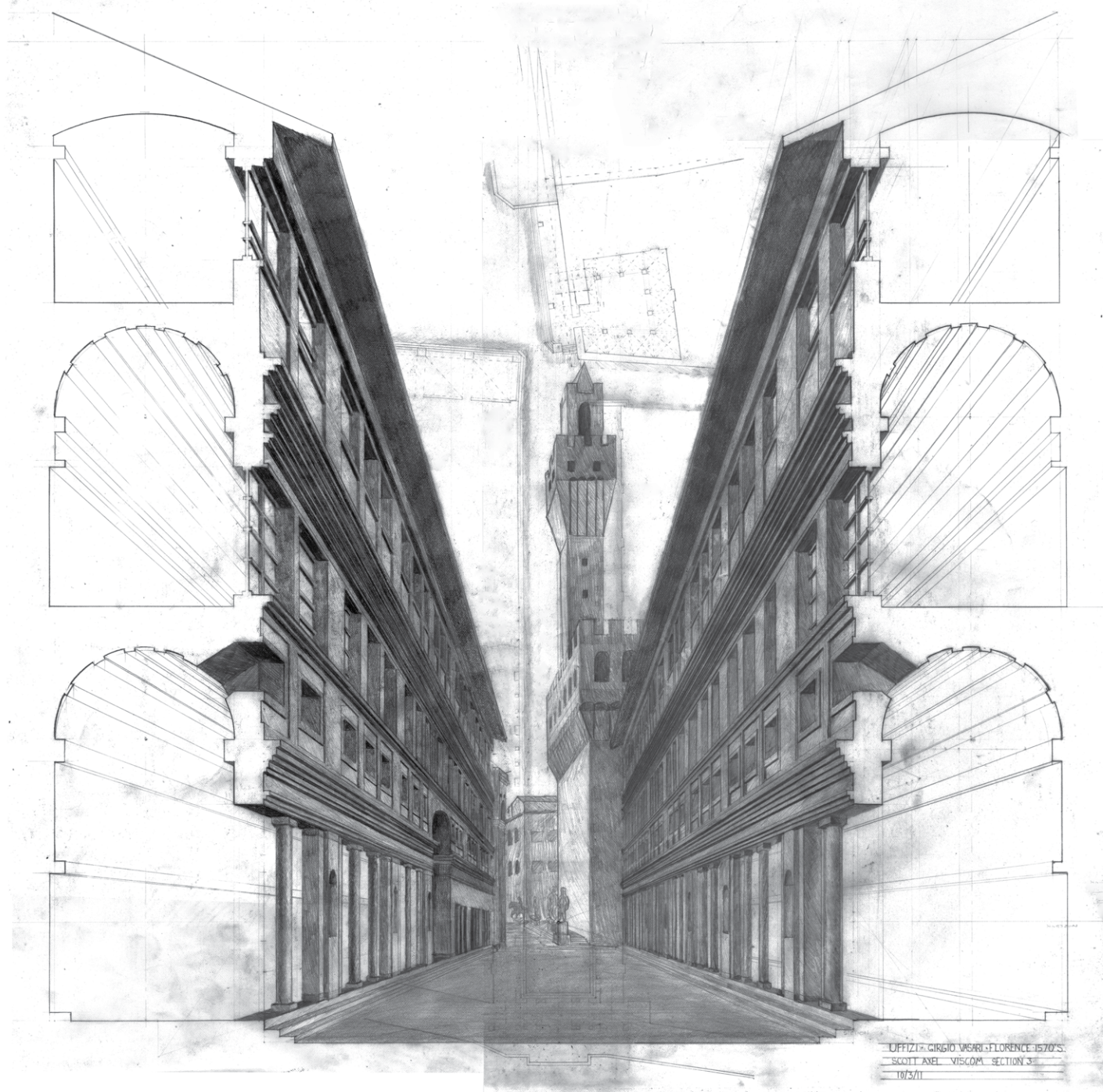
Darwin Martin House Analytique - Professor Jamie Cooper - Fall 2011 - Arch 121

A compilation of vignettes to demonstrate the structural (left) and architectural aspects (right) of Frank Lloyd Wright's Darwing Martin House. This was an experimentation that included ink and watercolor to create graphics and drawgins over a three week period.



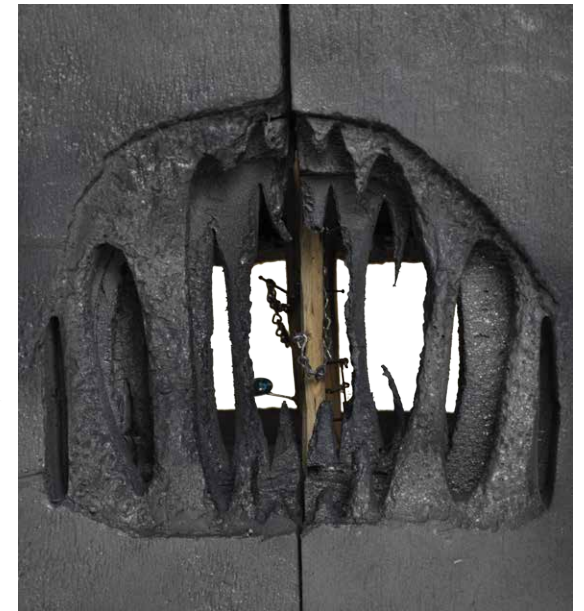
Uffizi One Point Perspective -  
Professor Jamie Cooper - Fall 2011  
- Arch 121 - Five weeks

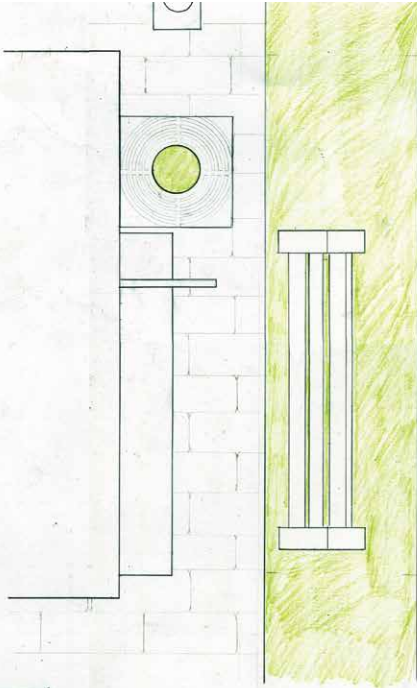
The culmination of this course was to combine multiple drawing types in one composition. The plan was the first element introduced, which provided reference for the perspective of the inner street facades. The section cut was a lesson in contrast. Finally, the rendering used skills from previous projects about shade and shadow, as well as the emphasis of line weights.



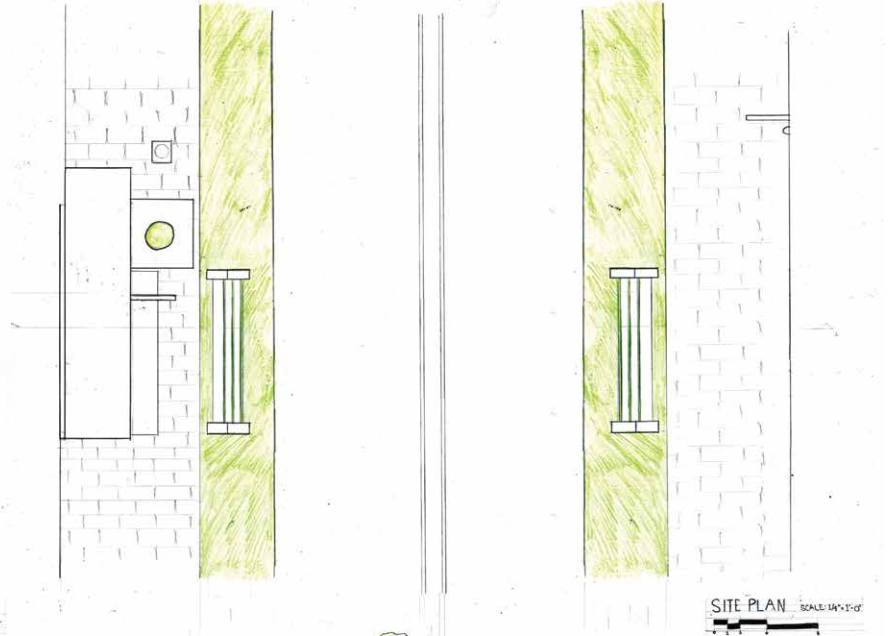


The rationale behind this project was to learn how to follow a client's needs. Once assigned merfolk as the mythical creature to design for, I figured the basic needs of a merfolk society to be for safety, congregation, and a natural feel. The basilica style to this 'natural' feeling cave was for a grand hall that their society would gather in. The entrance was disguised as a cave entrance at the sea floor in order to provide safety. A great deal was learned about material effects on each other. The foam body was spray painted with multiple types of paint in order to create different rates of corrosion and naturalistic elements to it. The method of cutting also varied from band saws to hot knives.





PARKING SPOT PLAN  
SCALE: 1/4" = 1'-0"



SITE PLAN  
SCALE: 1/4" = 1'-0"

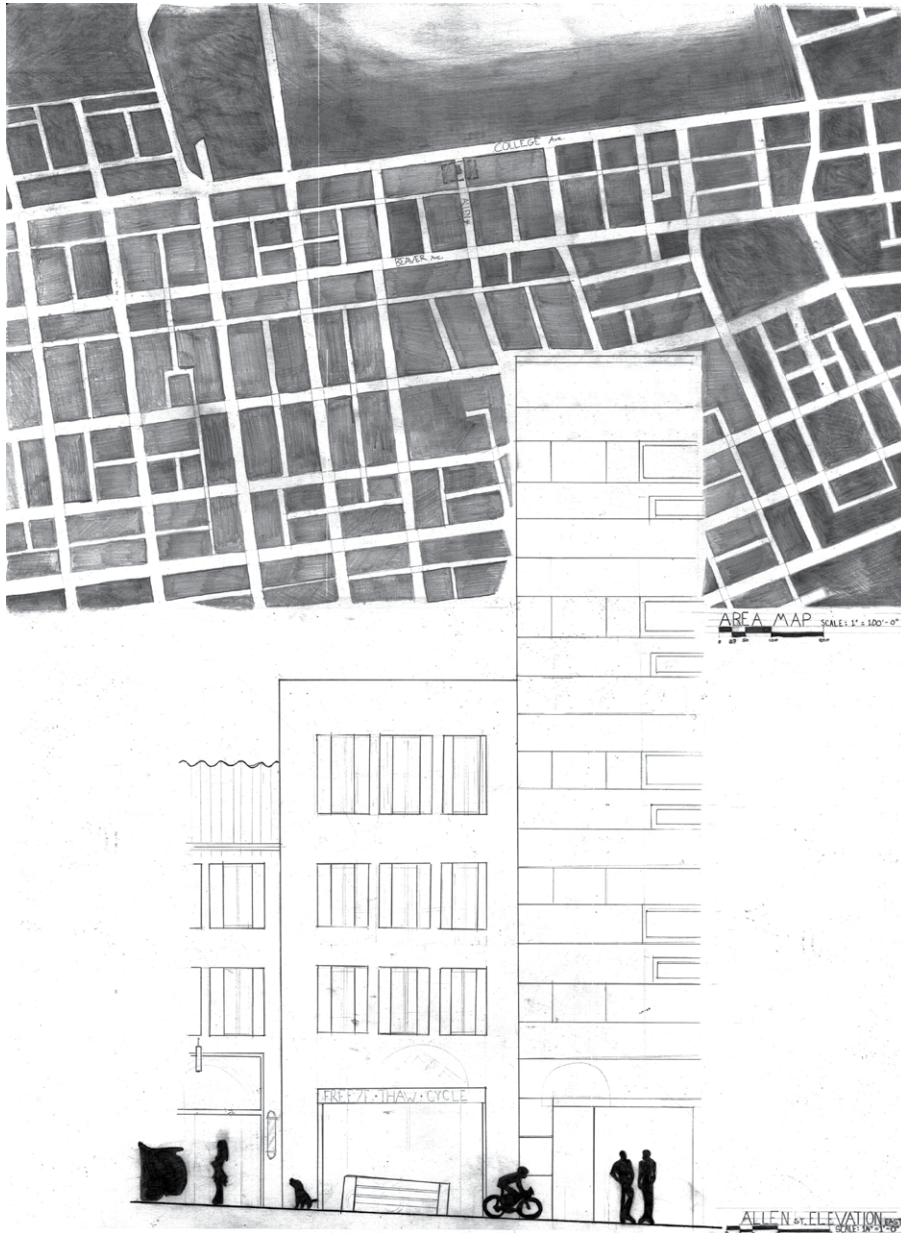


ALLEN ST. ELEVATION WEST  
SCALE: 3/8" = 1'-0"



ALLEN ST. SECTION A-A  
SCALE: 3/8" = 1'-0"





## ParkJing Day - Professor Jodi LaCoe - Fall 2011 - Arch 231

The first design project of my student career was actually partnered with upper year landscape architecture students. The project lasted 8 weeks and encompassed site documentation, team work, production of a final product, and creative design. Based on the park we created, it was up to individuals to design interventions for the surrounding neighborhood. I added a few 'green' touches to the architecture and made the street completely pedestrian.

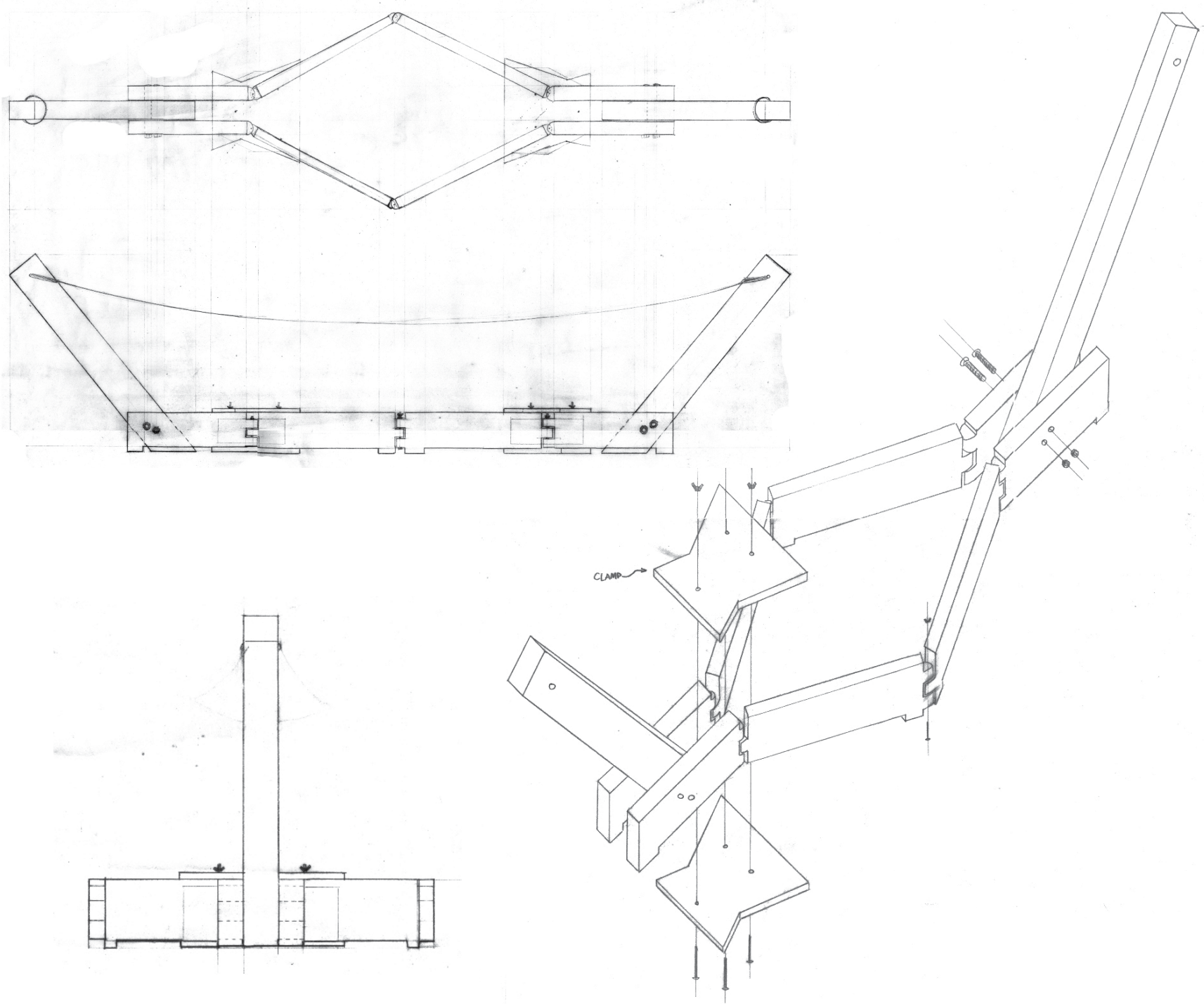


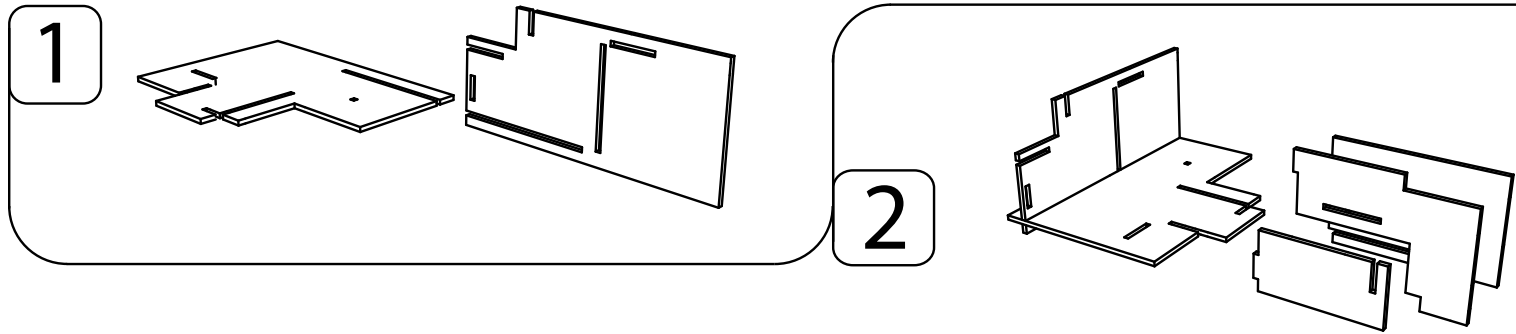
Transformable Hammock - Professor Danielle  
Rivera - Spring 2012 -  
Arch 232 - 6 weeks

The criteria for this project were simple enough: build a chair based on an object that can fit into a box. My object was a windshield wiper. I chose to focus on the adaptability of the wiper and its sensitivity to pressure. A hammock has all these things as it reacts differently to each patron. The difficulty of the hammock was making it stable to fit a person while keeping it transformable. The hammock could support up to 150 lbs and be secured with a strap to carry around.







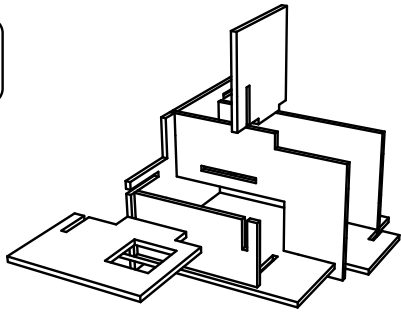


Digital Modeling and Fabrication - Professors Reggie Aviles and Jodi LaCoe - Spring 2012 - Arch 122 - 10 weeks

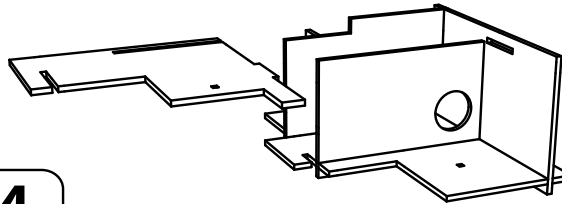
The course purpose was to learn multiple softwares and how each of them were beneficial in certain areas compared to others. The components on this spread include a rendering from Revit of the Schroder House, and a birdhouse and bird design based on it from Illustrator, Rhino, and Pepakura.



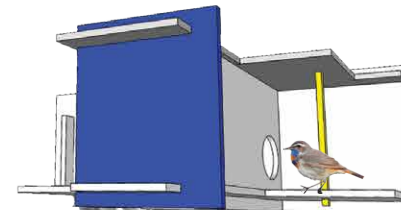
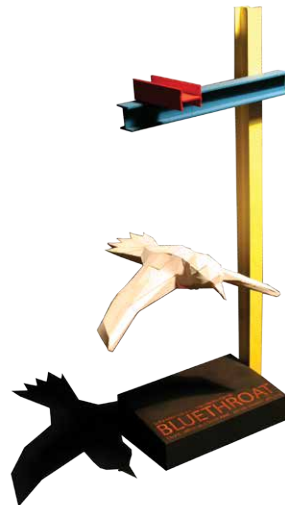
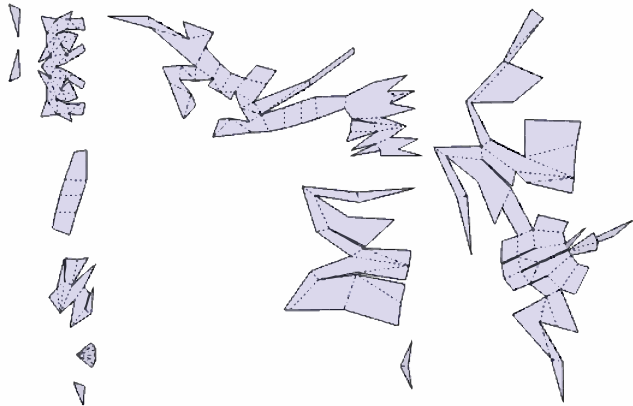
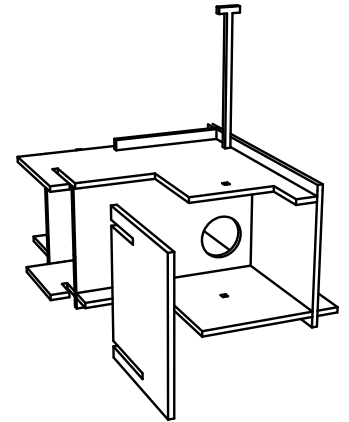
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4



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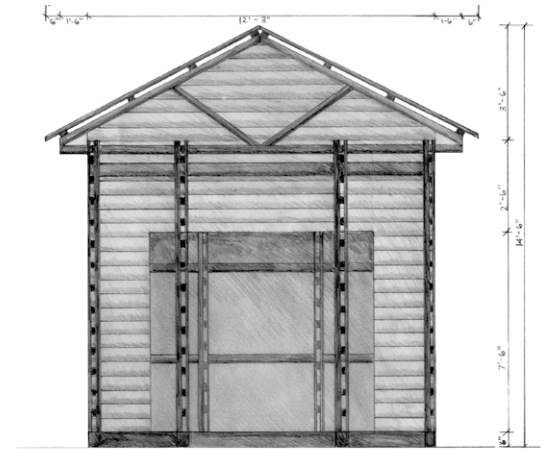




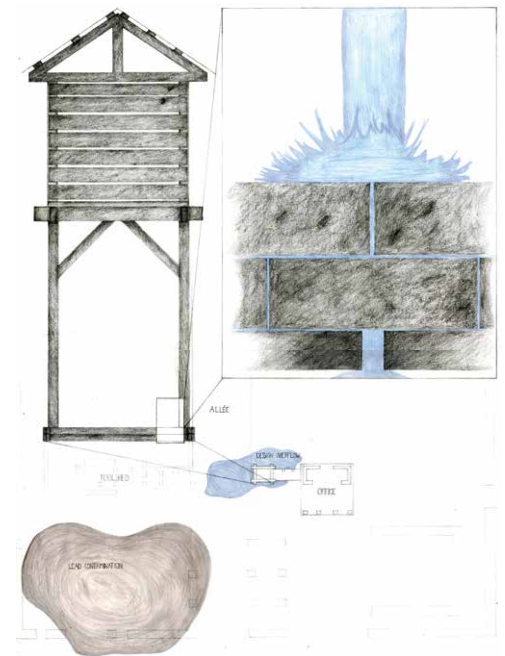
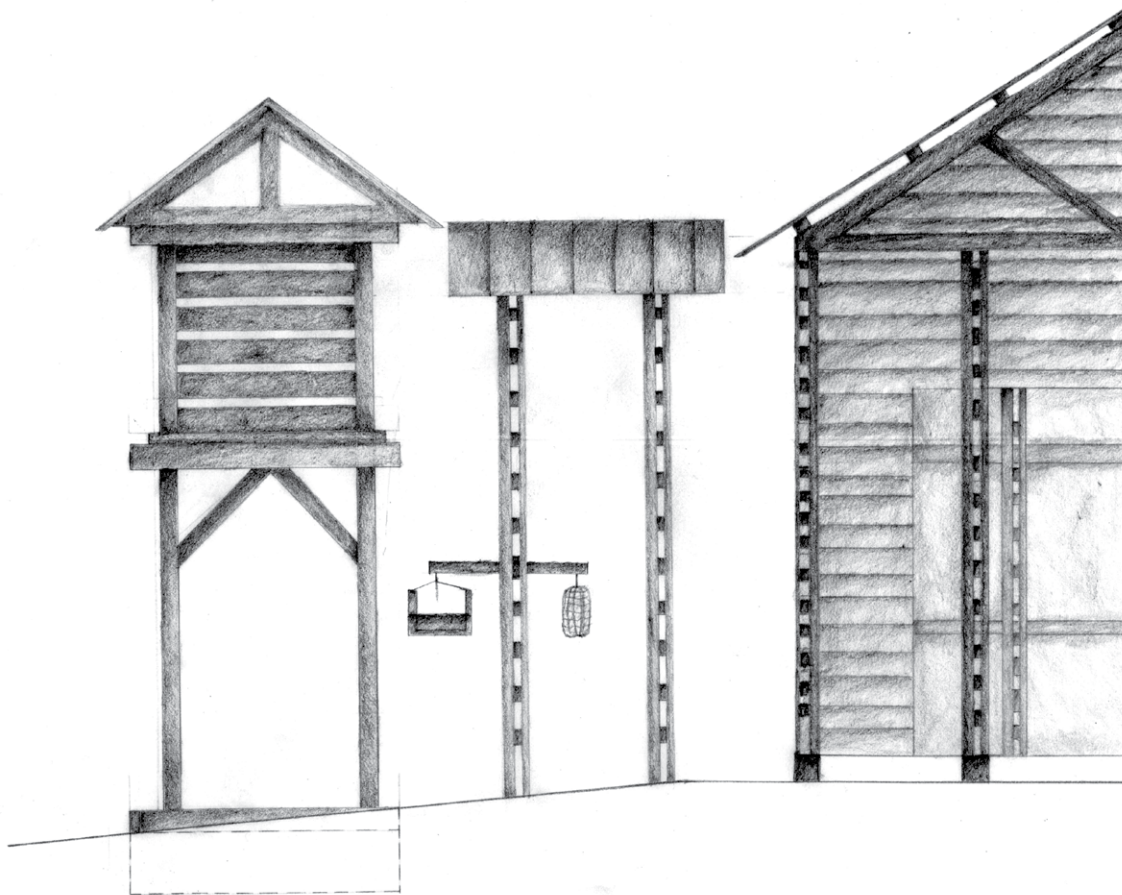
Design Build Water Tower - Professor James Kalsbeek - Spring 2012 - Arch 232

Over a 10 week period, this group project was the culmination of my first year design studio. As project manager of the group I organized the project as a whole and coordinated jobs between members. We had to make sure the tower fit into the site provided as well as the architectural precedent (there were 3 preexisting structures on site). Another barrier was the low budget, forcing us to use reclaimed materials. The tower is still used to this day as a workstation for mixing concrete, washing tools, and distributing water.





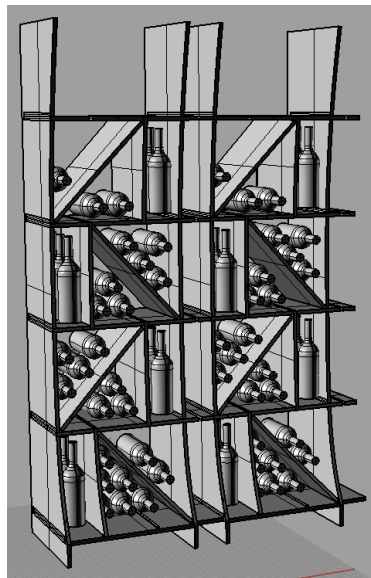
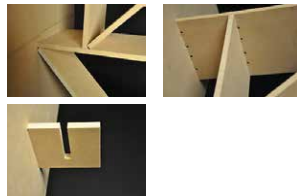
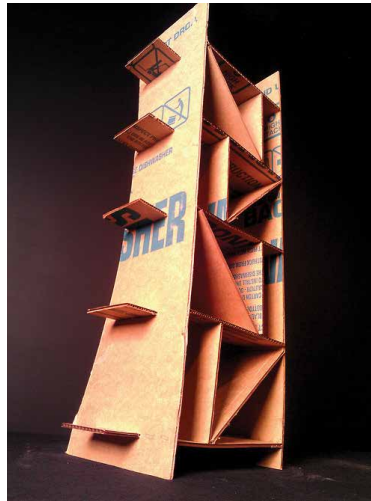
SCALE 1/4" = 1'-0"





Wine Rack Digital Fabrication - Professors Daniel Cardoso-Llach and Eric Sutherland - Fall 2012 - Arch 203

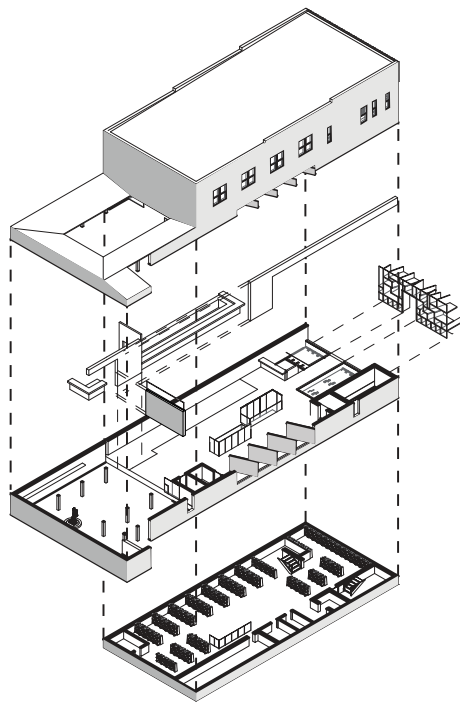
This quick assignment was primarily used as a warmup for our next project, but also served as a way to incorporate furniture design into architectural design. The CNC was used to make the full scale wine rack. It was curved to resemble a wine cellar wall and so that multiple racks could be placed next to each other so as to seem continuous.



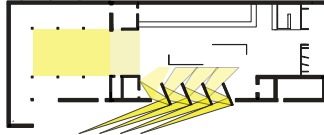


Enoteca - Professor Shadi Nazarian - Fall 2012 - Arch  
231 - 8 weeks

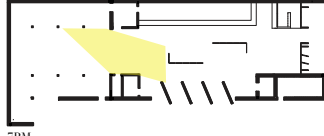
The design initiative for this project was to bring in high class entertainment while keeping the existing building intact. The feel of my enoteca was one of peace and calm, contrasting to the hustle and bustle of a downtown college campus. Light was a main focus of mine in this project, as the control of it was a larger goal.



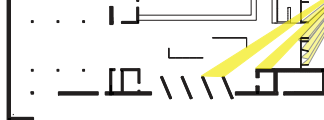
Lighting Diagrams 12 PM



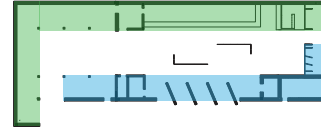
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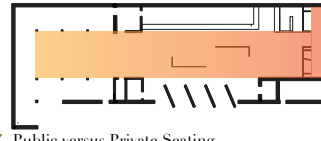
7PM



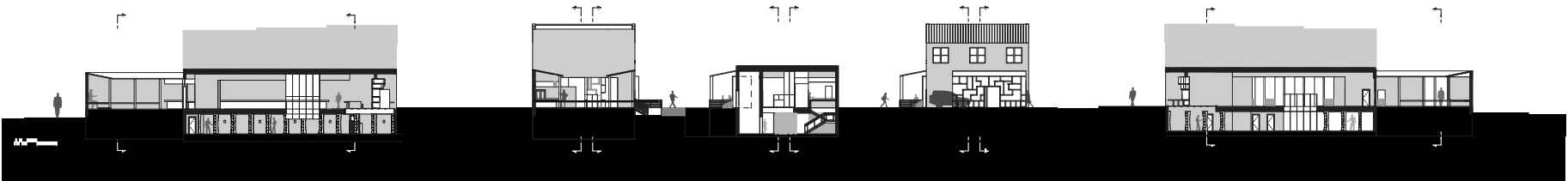
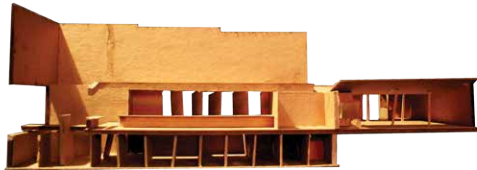
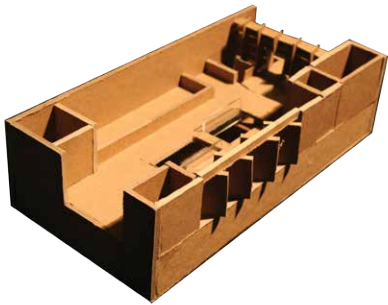
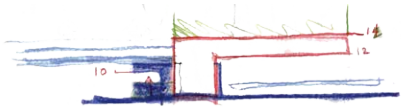
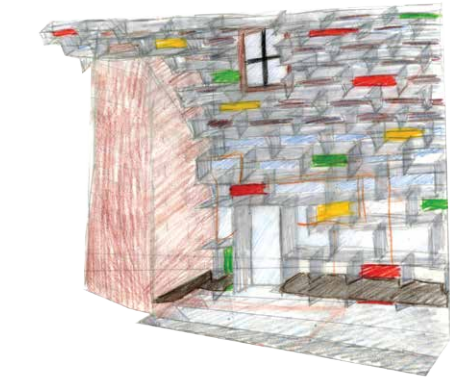
Conceptual Diagram - Ground Floor



Public to Private Flow



Public versus Private Seating



Geodesci Sphere Materials Study - Professor Eric Sutherland - Fall 2012 - Arch 203 - 6 weeks

The geodesci sphere project was a group project done in stages. The facade elements (soda cans) were applied after the ball itself was made from natural vines. The sphere is a statement against using bought materials (which any architecture student knows costs a lot). The sphere, being geodesci, has a constant shape that is tessellated across its surface. This project also incorporated construction drawings.



1. Cut tops off soda cans and cut can into a rectangular sheet

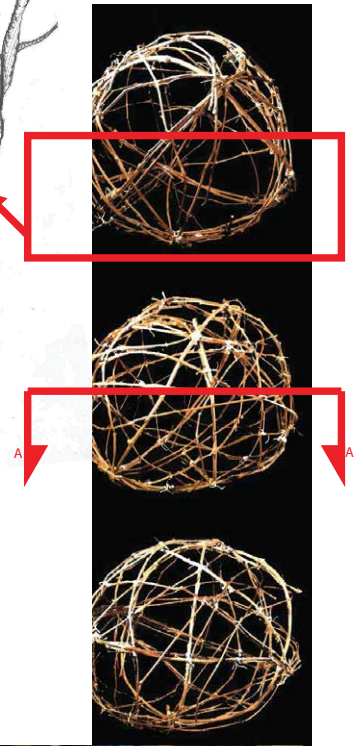
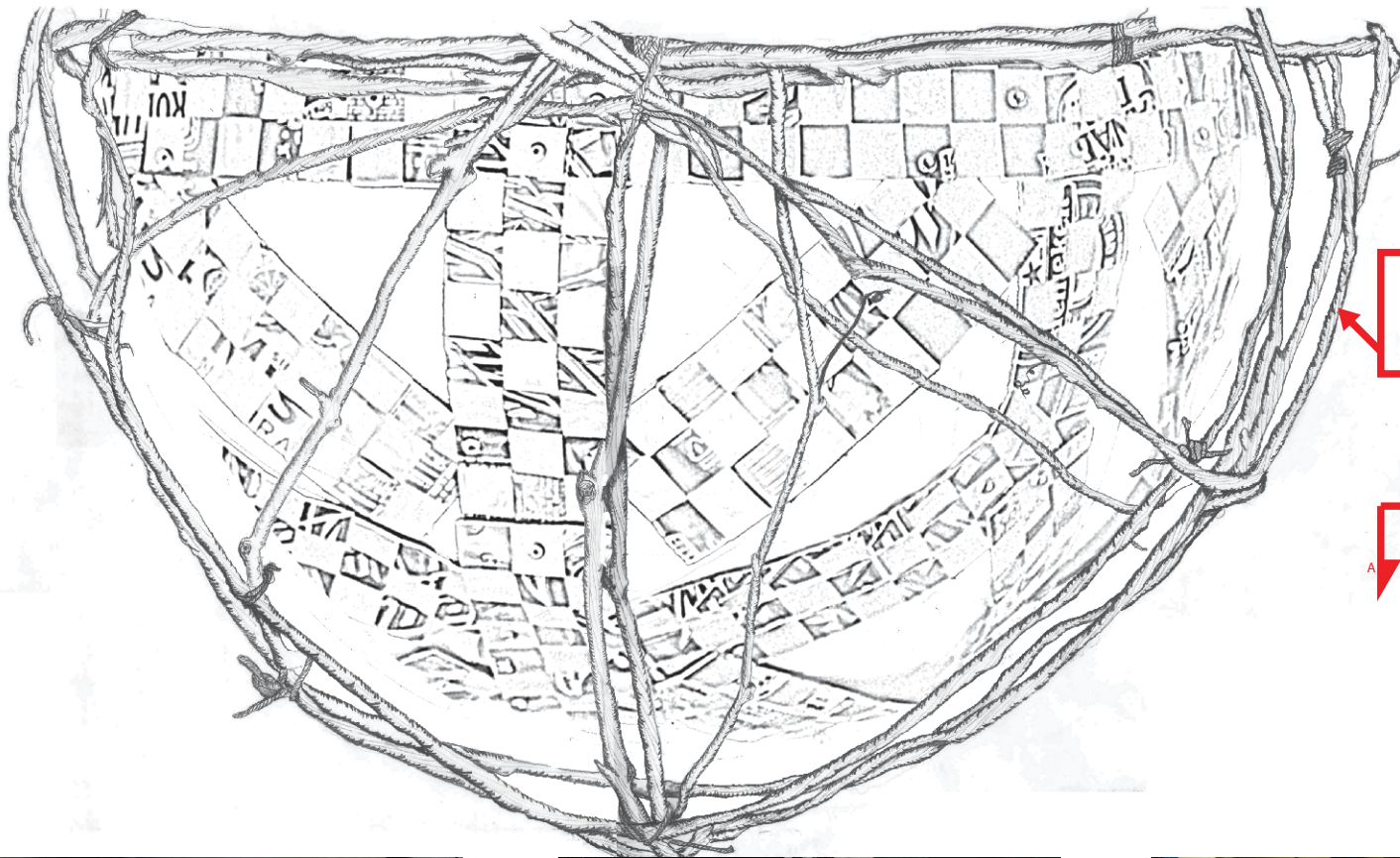


2. Cut sheets into 3/4" strips



3. Weave the horizontally and vertically cut strips together to make a woven rectangular sheet





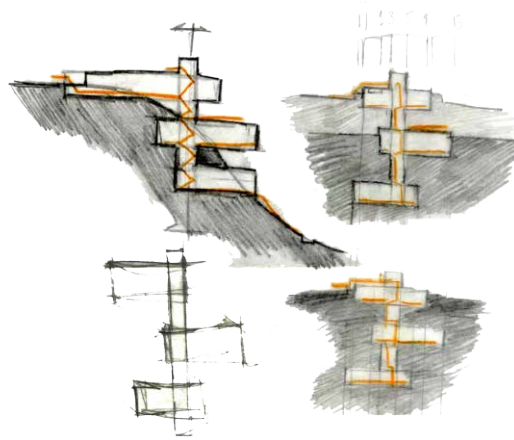
4. After the strips have been woven together, fold the edges down to help keep the sheet together then cut off the extra pieces



5. Use a rivet gun to fasten the woven sheets together around an existing sphere



6. Remove the internal sphere before finishing the sphere of woven sheets

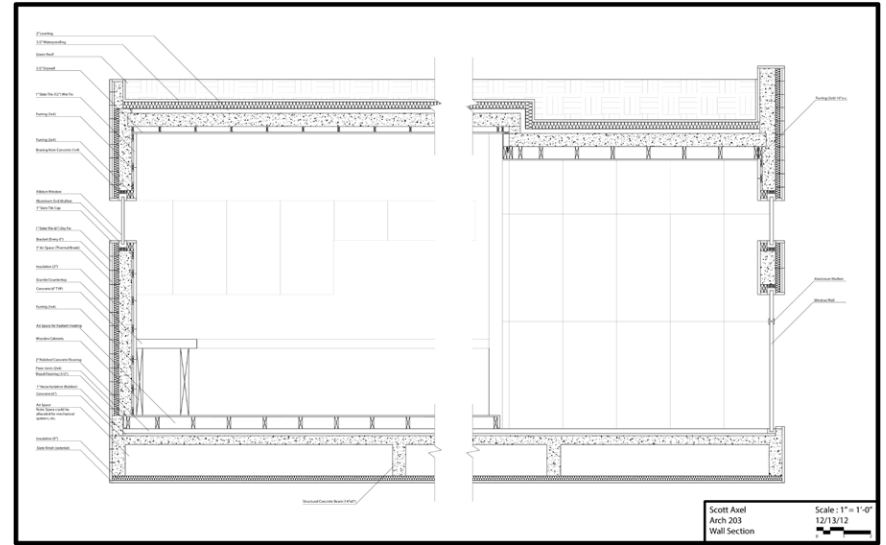
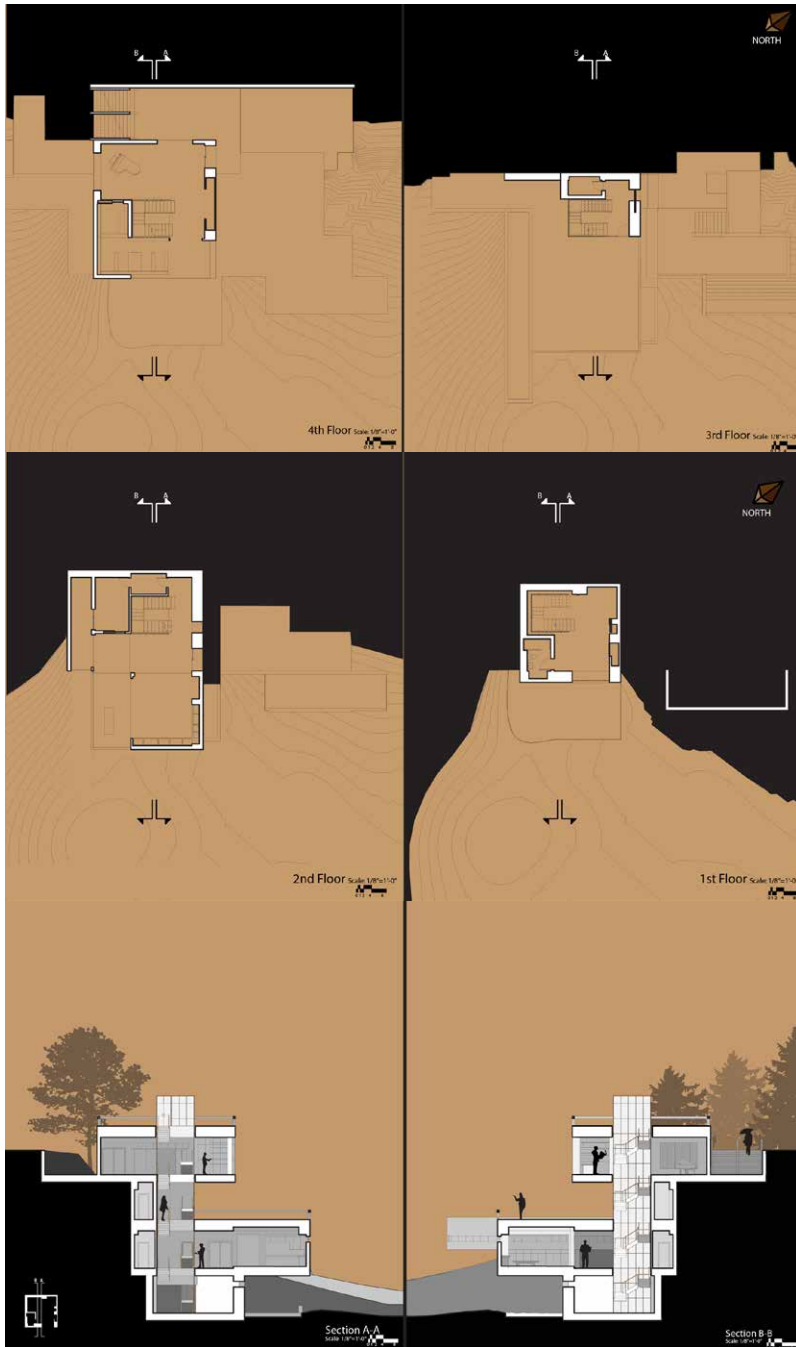


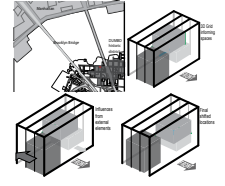
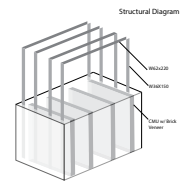
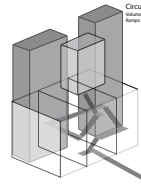
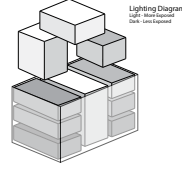
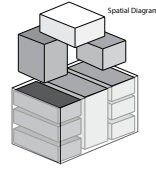
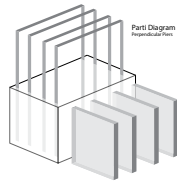
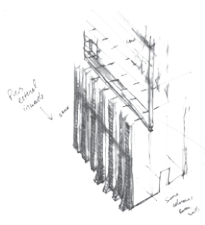
House for a Musician - Professor Jamie Cooper - Fall 2012 - Arch 231 - 8 weeks

This project pushed the issue of dealing with a radical sloped site into the face of students. Located on a lake, the house for a musician had to derive from the facets of music as well as the site itself. My project utilizes the slope to create dynamic cantilevers and openings that would not be possible on a flat site. The site is part of the experience of the building. The building itself has an additive feel on its outside, as if it was pulled from the earth, yet a subtractive interior, suggesting it was carved away to create spaces, which is accentuated by the local material choice - slate.



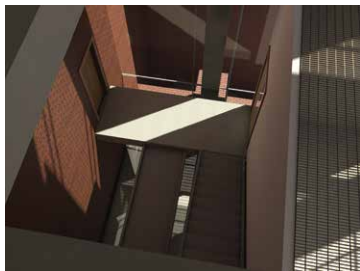




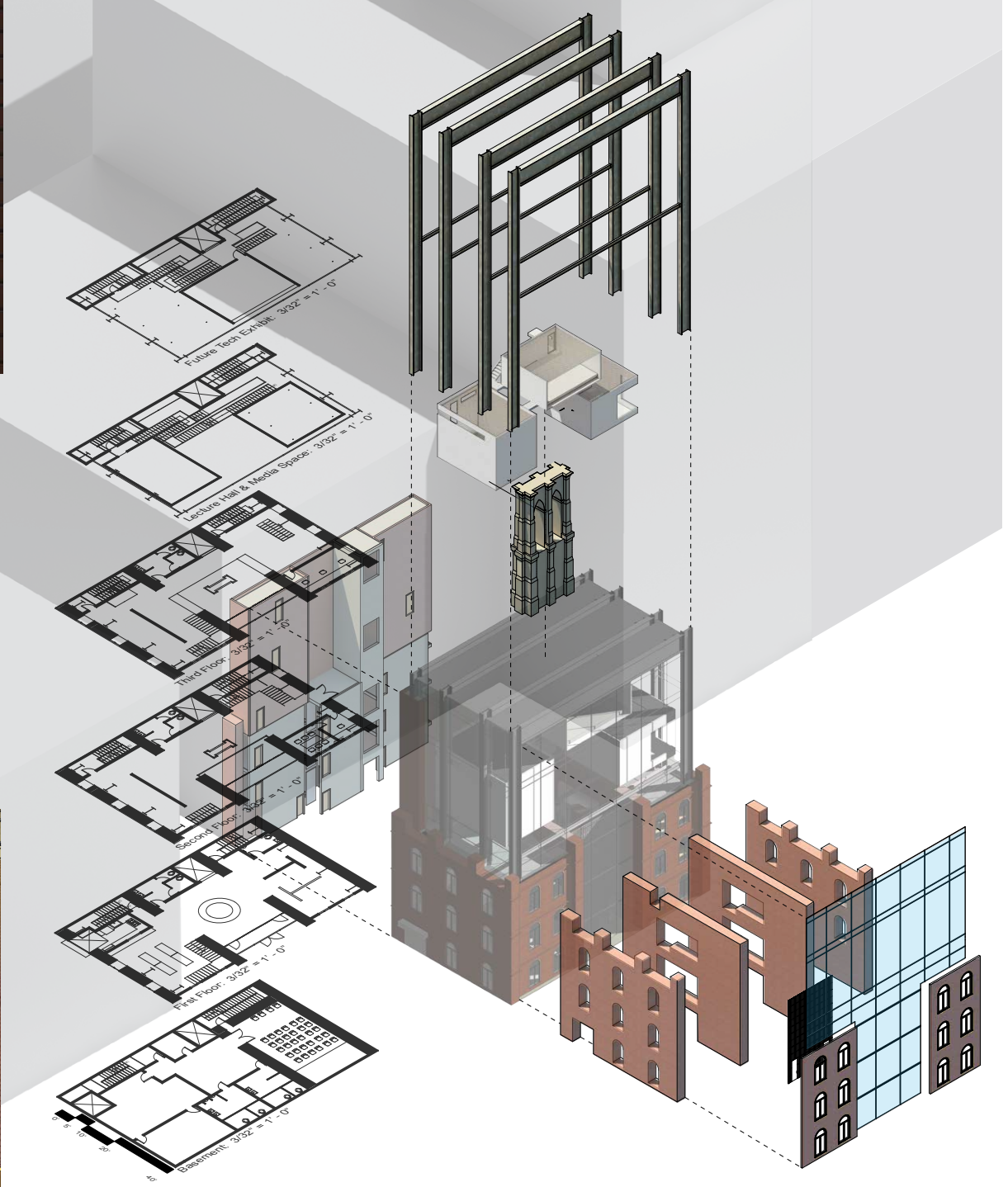
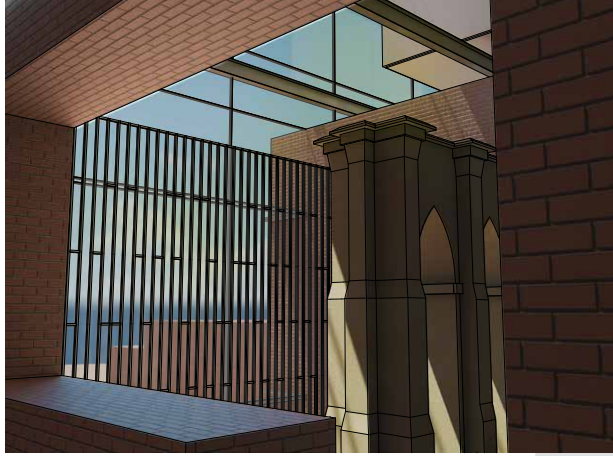


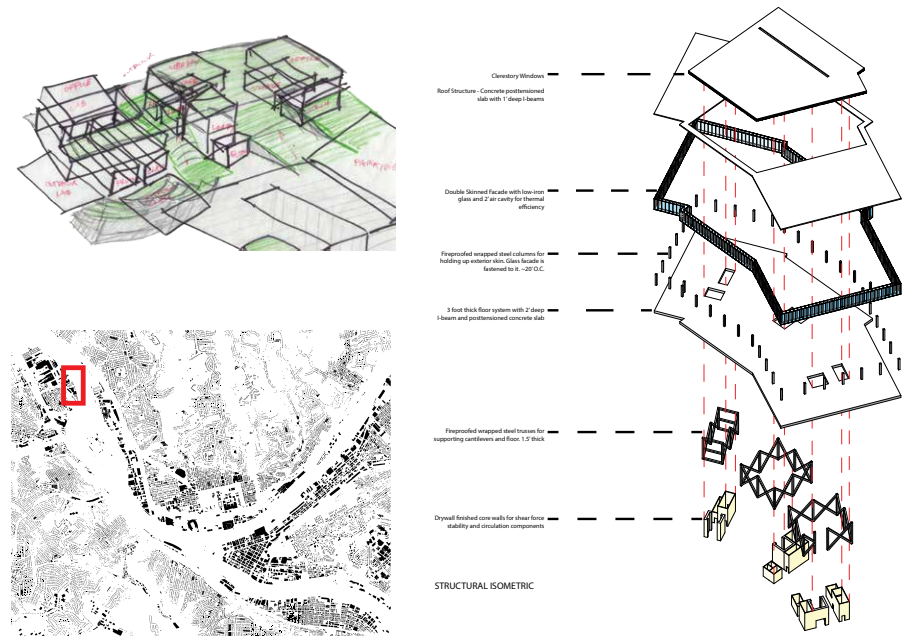
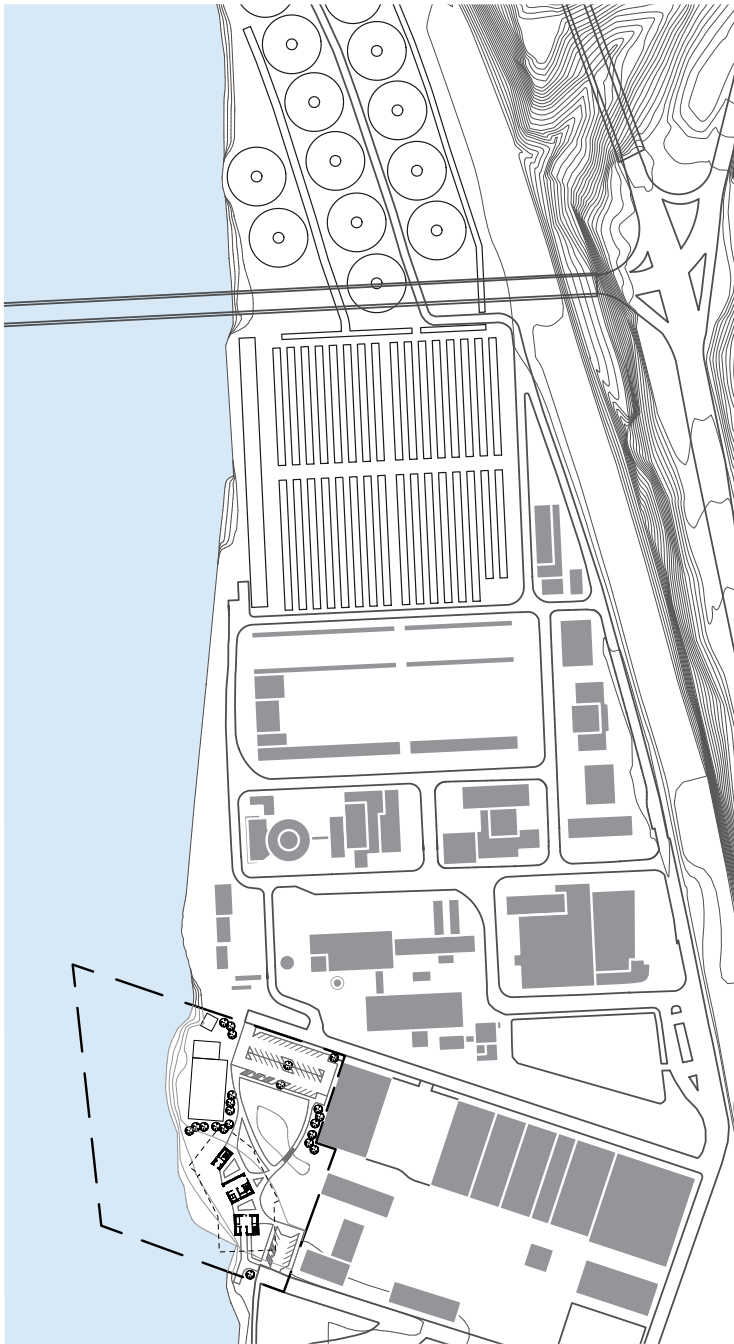
## NCMA Brooklyn Bridge Museum - Professor Loukas Kalisperis - Spring 2013 - Arch 232 - 16 weeks

This semester long project was the most in depth look into a building. We travelled NYC and visited the site in person in order to get the feel of the site. Located in DUMBO, Brooklyn, I felt it was important to keep the feel of old Brooklyn's industrial style while showing that growth can still happen. The bottom half of my building is solid, heavy, brick, with piers similar to its surroundings, while the top has cable supported boxes and a very large steel frame to contrast it as much as possible.





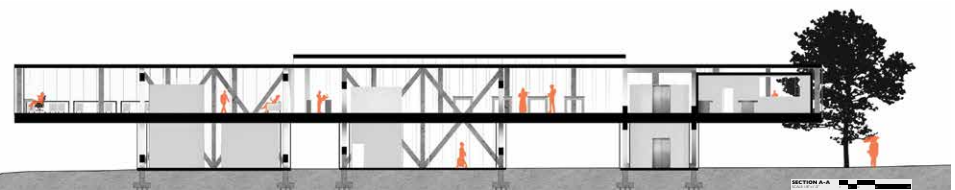
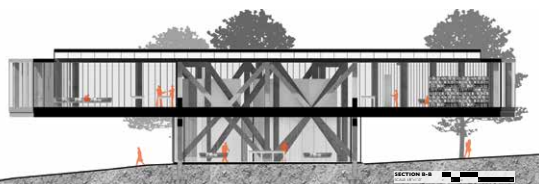
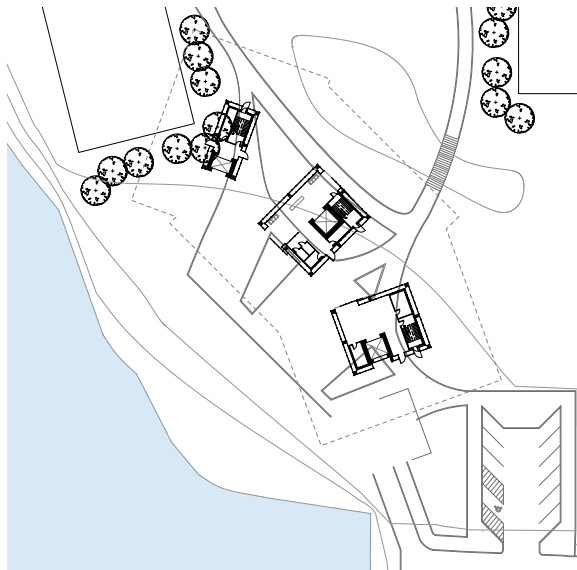




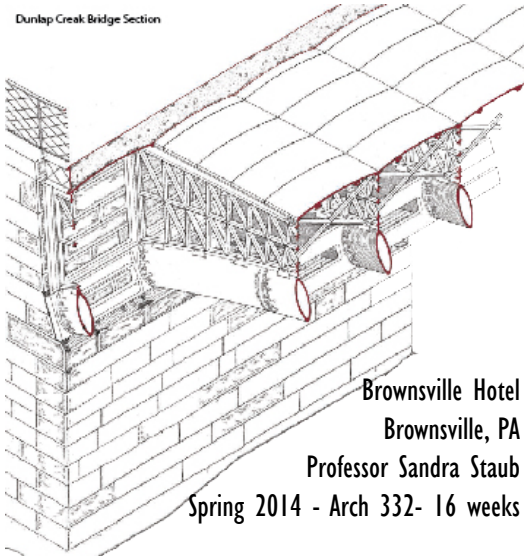


ALCOSAN Wastewater Treatment Plant - Pittsburgh, PA  
 - Professor Laura Foxman - Fall 2013 - Arch 331 - 16 weeks

The facility is home to an educational, interactive, and research hub in which multiple groups of people interact. The main floor is hoisted up on cores where the program for each hub flows out from. The layout is largely defined by furniture so the building can be flexible.

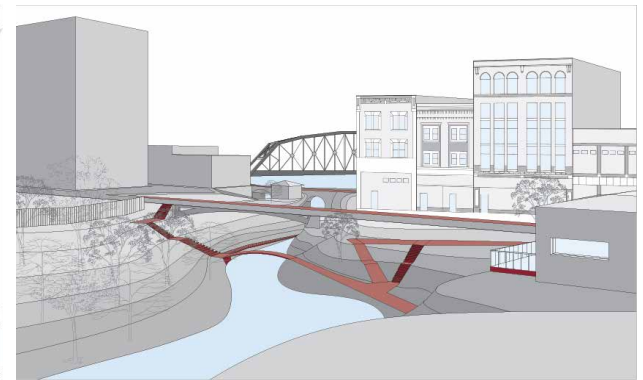


Dunlap Creek Bridge Section



Brownsville Hotel  
Brownsville, PA

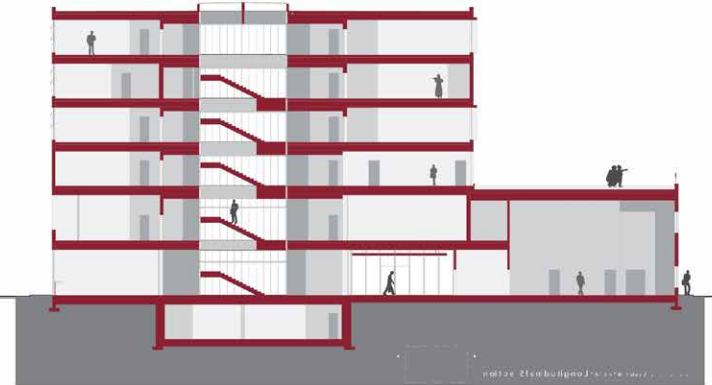
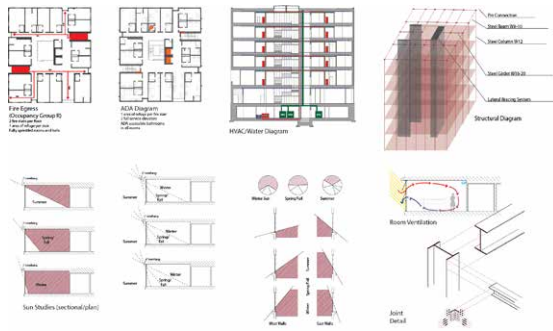
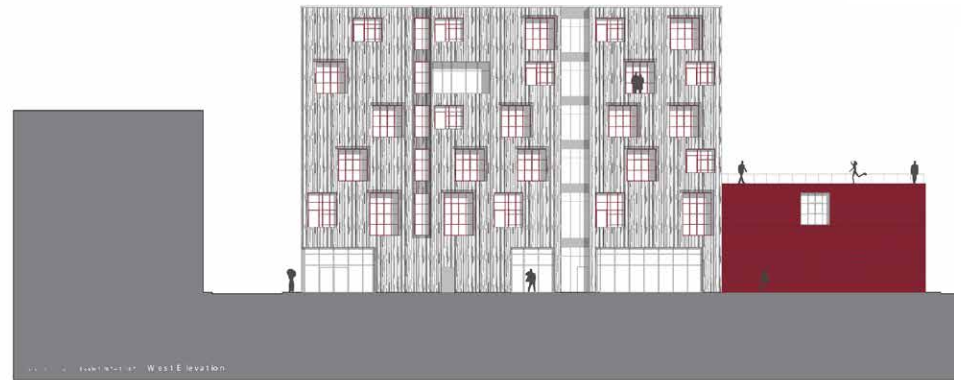
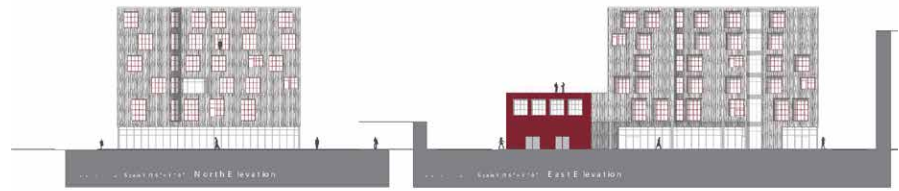
Professor Sandra Staub  
Spring 2014 - Arch 332- 16 weeks



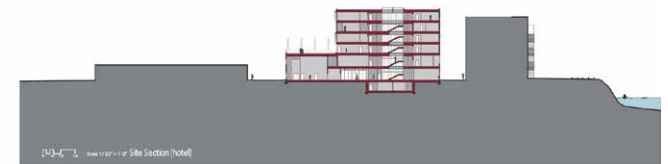
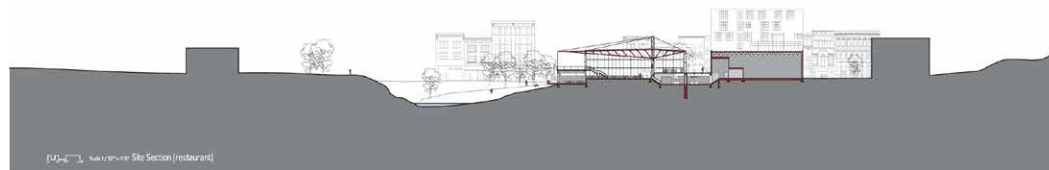
Brownsville, a defunct coal-mine town, required an urban center and revitalization to attract new visitors and residents. This project was a group project in terms of master plan coordination, building interactions and architectural vocabulary. My partner designed a restaurant while I designed a hotel. Both contributed to the site design of a park, launching dock, public garden, playground, and a phase 2 plan of office and retail buildings on the main street (in reclaimed historical structures). The aesthetics of the project were rooted in the industrial hand-made feeling of the town while using modern and new technology to create a new identity and help Brownsville flourish. This project culminated in the Foreman Competition where we finished as finalists among the 30 other projects in our year.

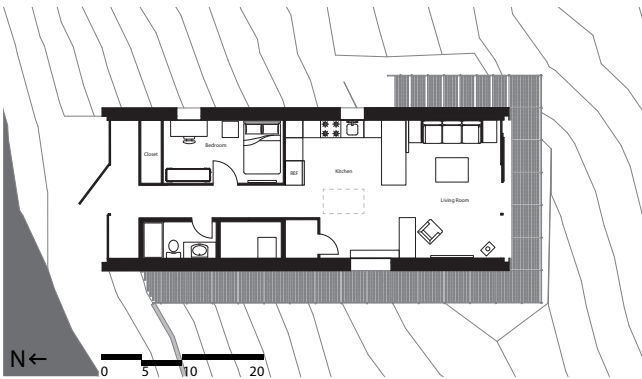
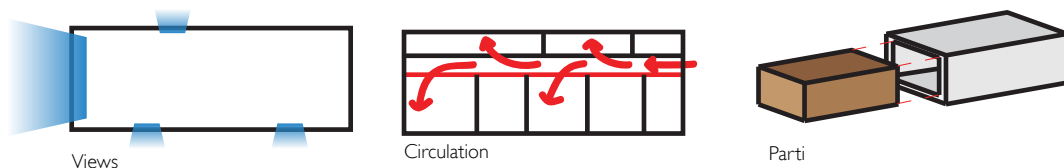






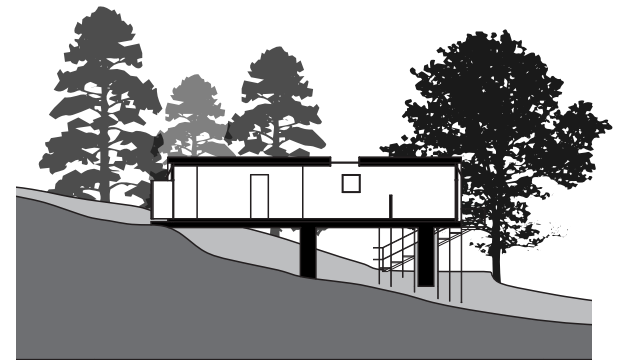
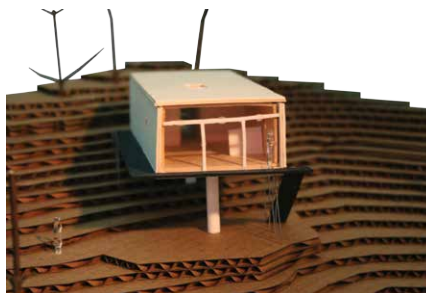
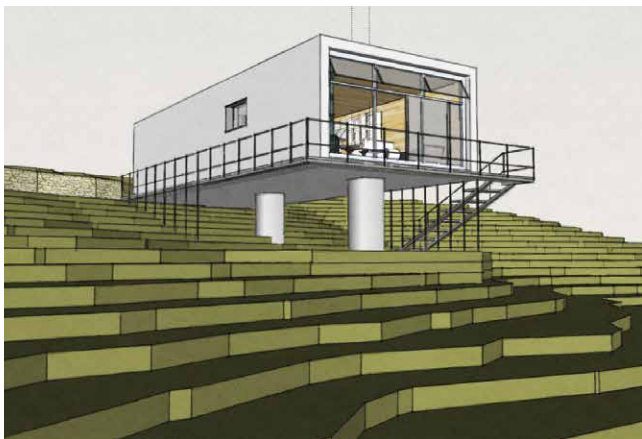
This project revolved around creating an efficient use of space with multiple targeted demographics. A central core plan with a pinwheel configuration provided similar modularity in room design while allowing for multiple room types and public spaces.



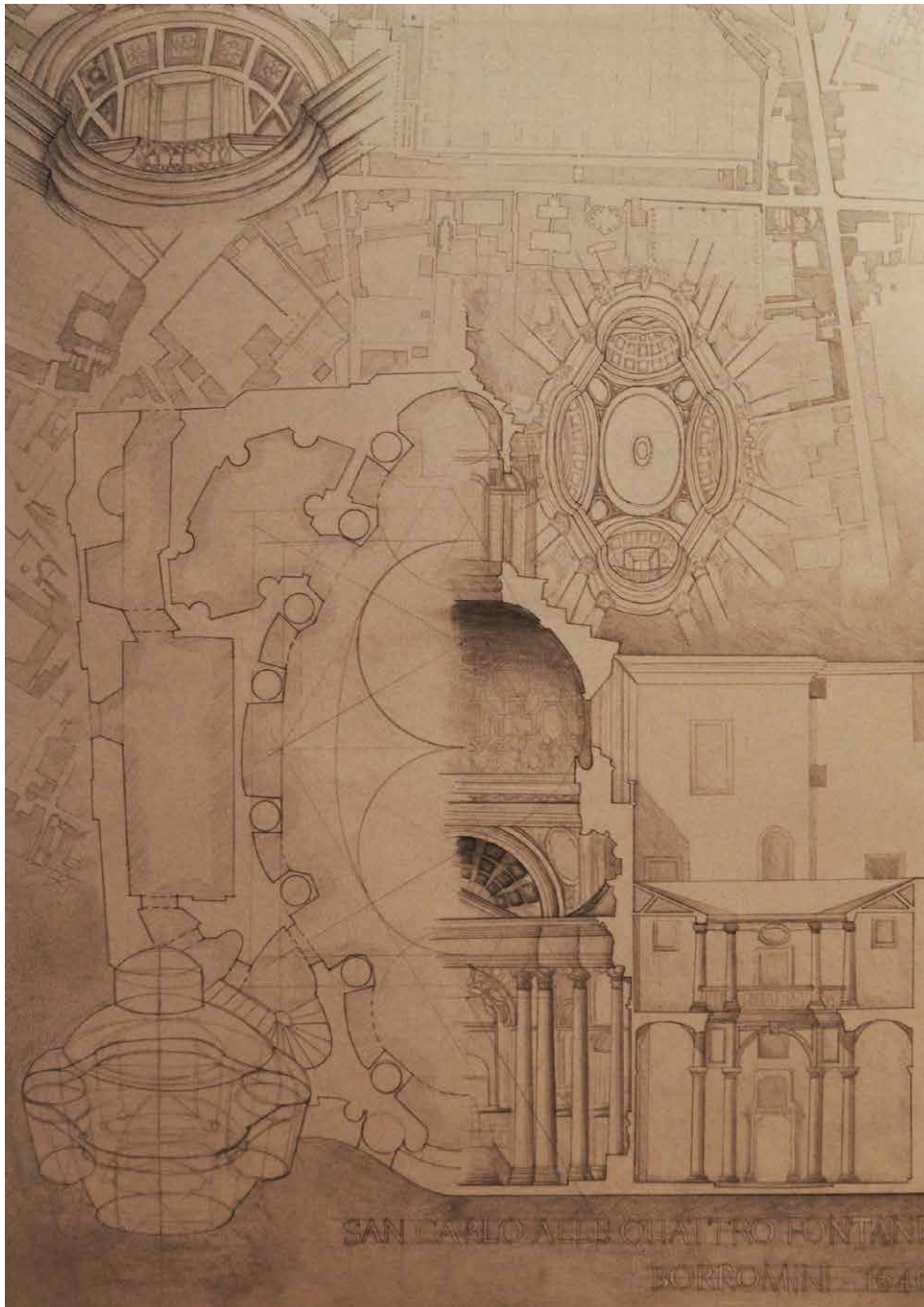


Hajjar Painter's House - Spring 2014 - 1 week

This house was a one week design competition in which a small 1000 SF house for a painter was designed in the State College area. The simplicity of form leads to an increased presence of nature in the project. Surrounded by a heavily wooded area, the landscape becomes the focus of the project.





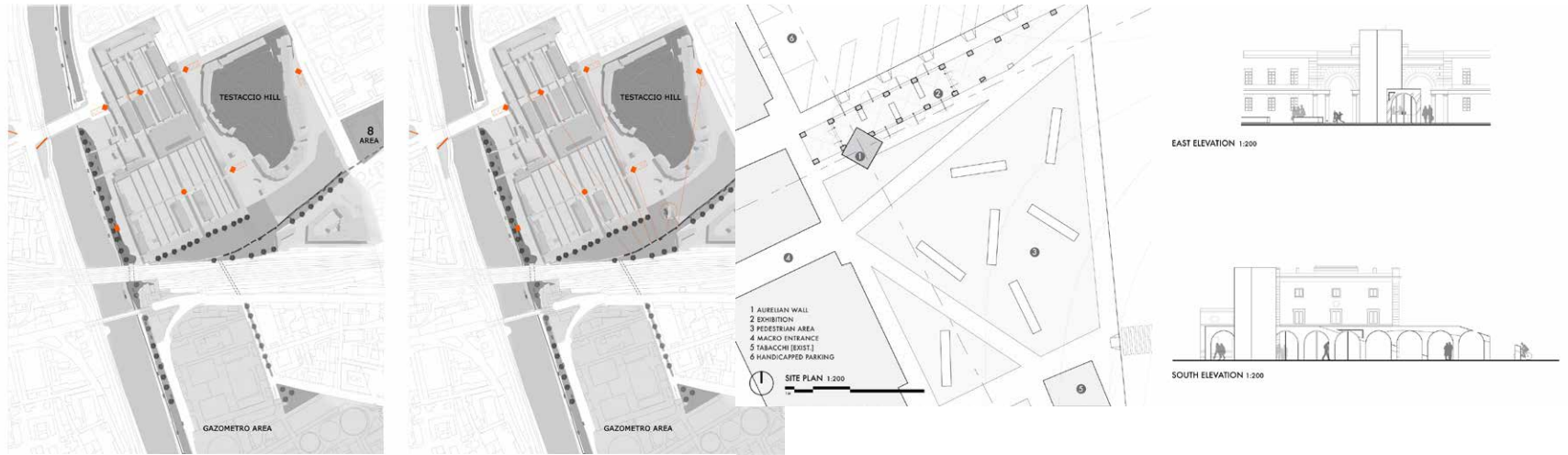


San Carlo alle Quattro Fontane Analytique - Graphite on Illustration Board -  
Professor Davide Sabotello and Romolo Martemucci  
Fall 2014 - ARCH 499B - 10 weeks - Rome, Italy

This is the final product of an analysis course that took me from Ancient Roman architecture and history to modern interpretations and adaptations in the Eternal City. Learning by experience was the goal of this course. I was able to touch, feel, and understand multiple masterpieces, such as the Pantheon, the Roman Forum, and the Campidoglio extending past the Renaissance into the Baroque and further into Fascist and Modern architecture. Personally, the architecture of Francesco Borromini resonated with me, and so I aimed to capture the geometric complexities, physical layering and architectural details of his 'San Carlino' atop the Quirinal Hill through this drawing exercise. Layered plans, sections, details and maps allowed me to delve into the specifics of such a wonderful creation.

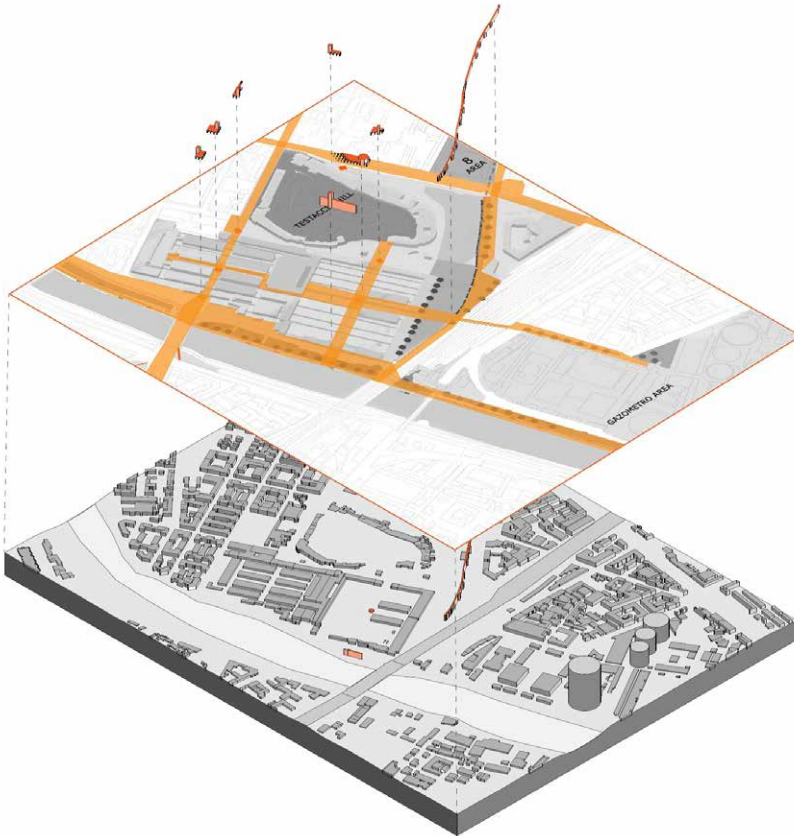




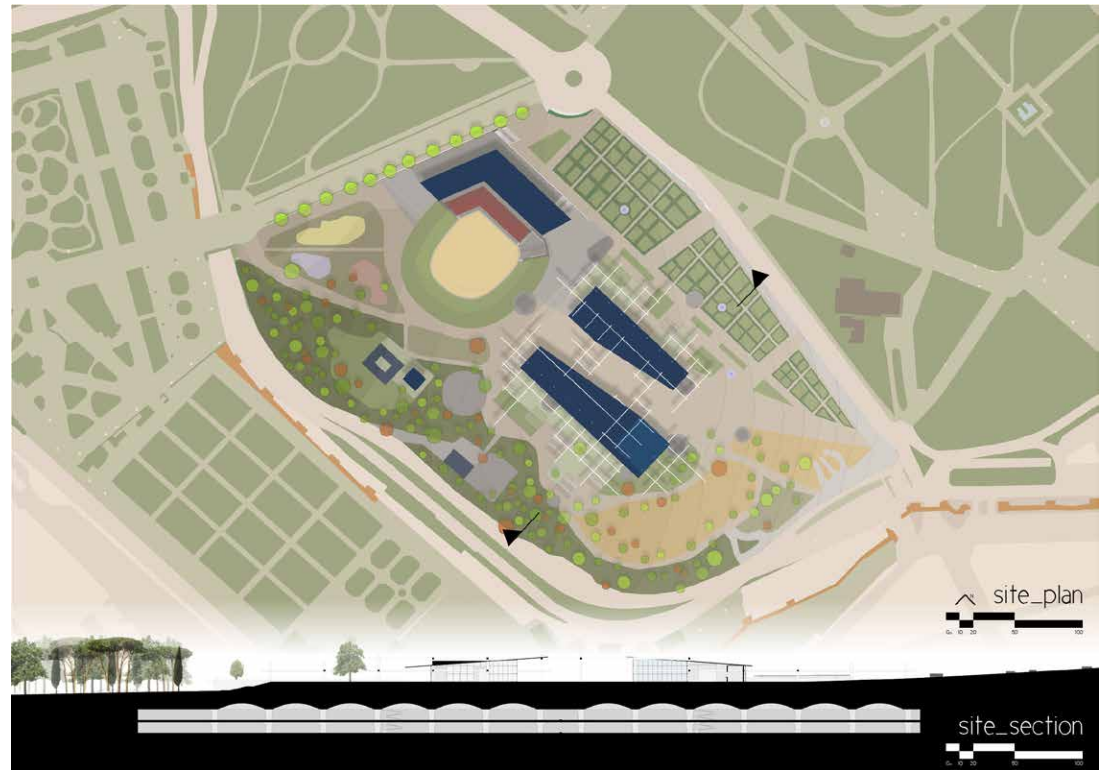
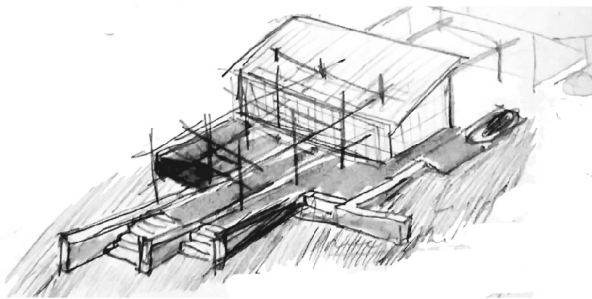
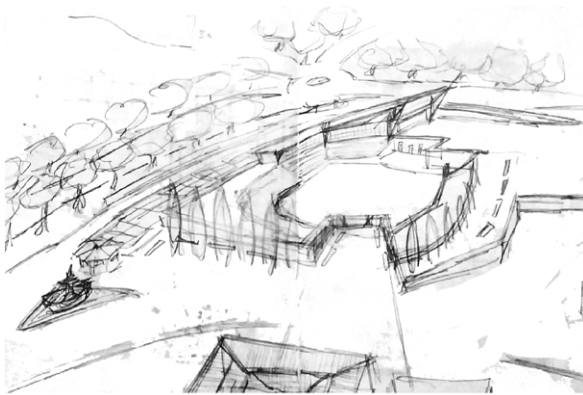


Aurelian Walls - Tokyo Wall Project - Professors: Kengo Kuma, Leone Spita, Davide Sabotello  
Fall 2014 - 2 weeks - Testaccio, Rome, Italy

This project was completed by one student from Tokyo University, one from Sapienza University of Rome, and two from Penn State. We were tasked with simply using the wall as a foundation for a design project. Our group decided that in this new and hip area, the walls were ignored and therefore the installation needed to bring the walls back into the public's eye. We took segments of the wall and moved them to major points on site (similar to Rome's obelisks) and added program specific pavilions with galleries or cafes or info booths.

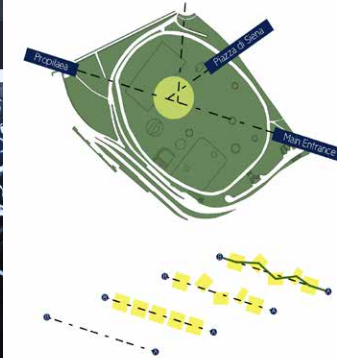






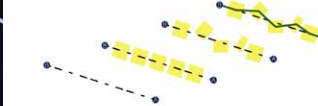
#### SITE CIRCULATION

Major Site Lines and Intersection



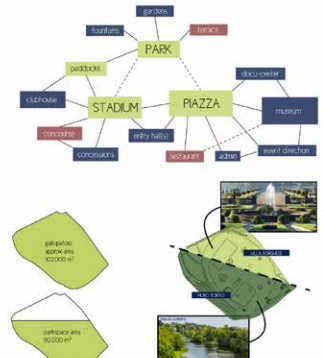
#### SPATIAL BREAKDOWN

Circulation Strategy with Building Geometries



#### PROGRAM PROXIMITY

New Program Elements and Interactivity

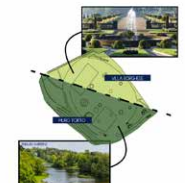


#### SITE AREA



#### GARDEN SYSTEM

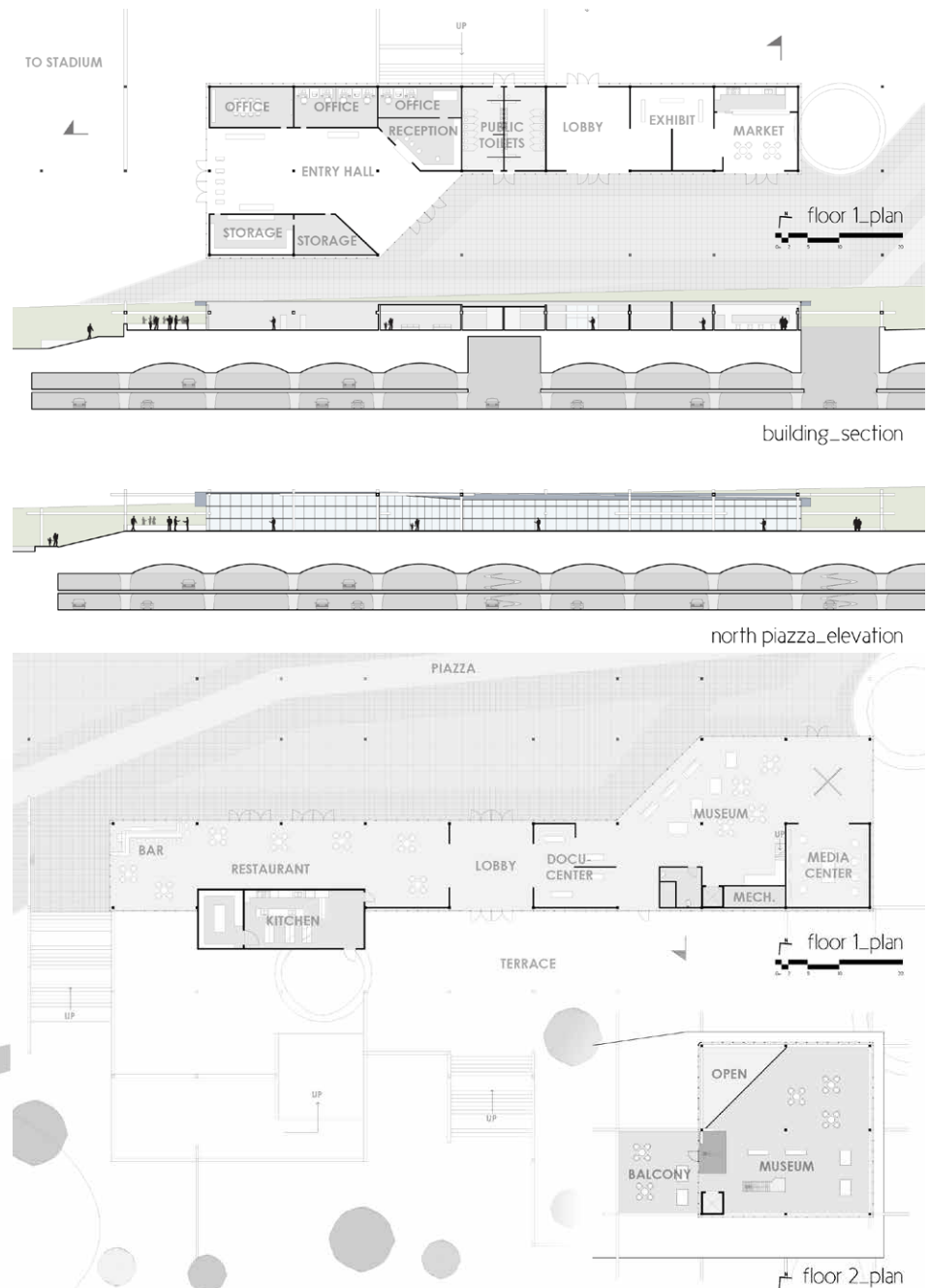
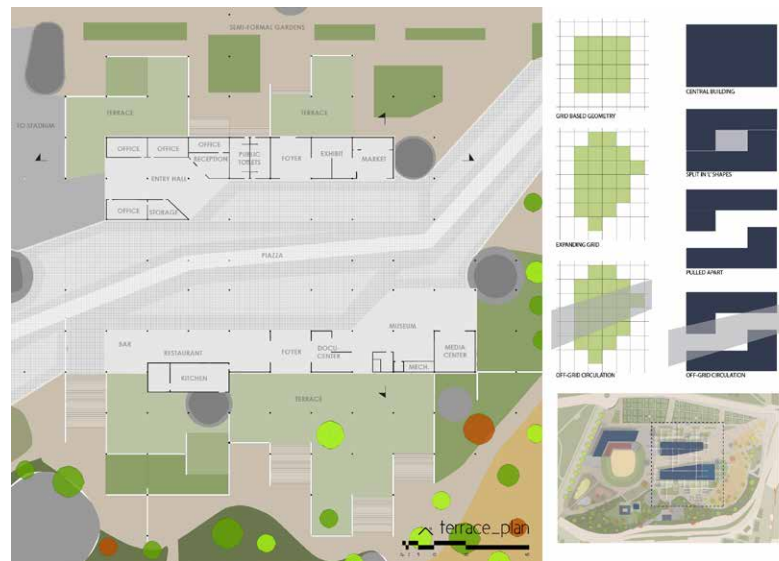
Typology Division and Site Organization



Villa Borghese Fairgrounds - Professor Davide Sabotello -  
Fall 2014 - 16 weeks - Rome, Italy

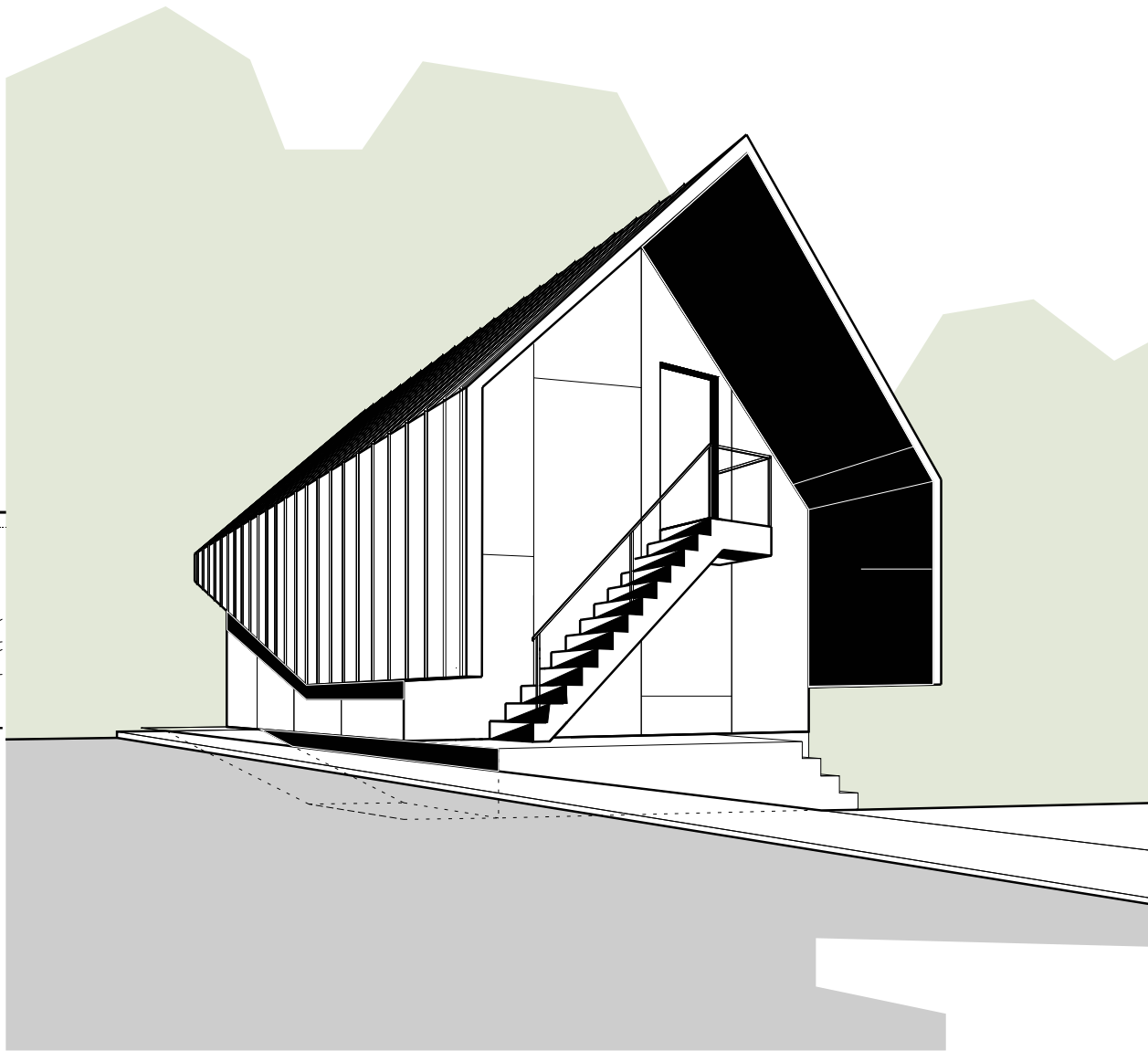
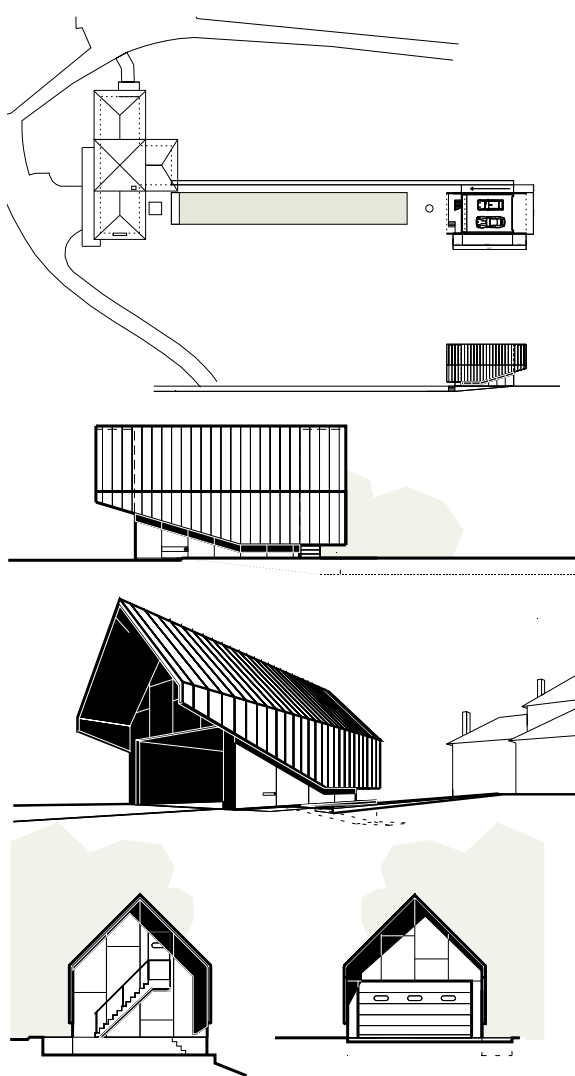
My personal project was derived from a group exercise of site analysis and master planning. My project uses two grid alignments, one of the parking garage for structure, and the other of the Pincian Gardens for tree locations. Major site lines also defined access and divisions within the site, such as from Porta Pinciana to the Pincian Terrace or from Piazza di Siena. The site, the Gallopatio, needed to accommodate sporting events, horse shows, concerts, a museum, restaurant and general supporting program. The major features are the stadium area, stables area, and fairgrounds (piazza) area.

The specific architecture is designed within the fairgrounds buildings. There are two shapes pulled apart to create a space between them. This space helps promote congregation and is a natural gathering space for events. There are two cores, the museum and the entry hall, which help anchor the two buildings. The rooflines accentuate the circulation path cutting across the site. To transition from landscape to architecture, there is an artificial terrace aligned to the grid which uses retaining walls and a series of extruded columns and beams forming a 3D grid. This grid is structure and ornament; it is a way for the building skin to be independent of structure and to anchor the project.



## Garage Guest House Loft - Erdy McHenry Architects - Spring 2011 - 1 week

As part of a one week internship program with Erdy McHenry in the beginning of summer, I learned the basics of firms and how they work, and a few tips and tricks with drawing and documentation. The head of the firm had me take conceptual sketches of his and work them into a 3d model. The pictures on the right are the resulting construction a year later.







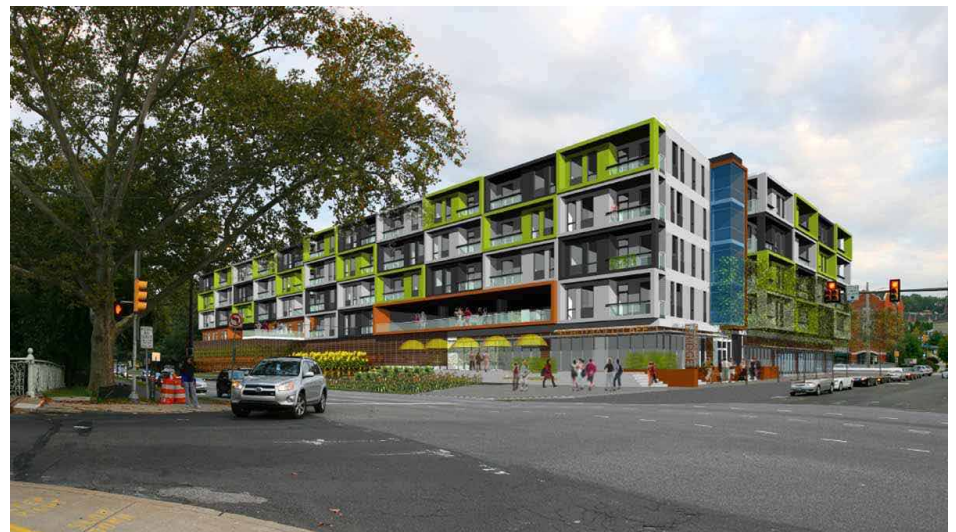


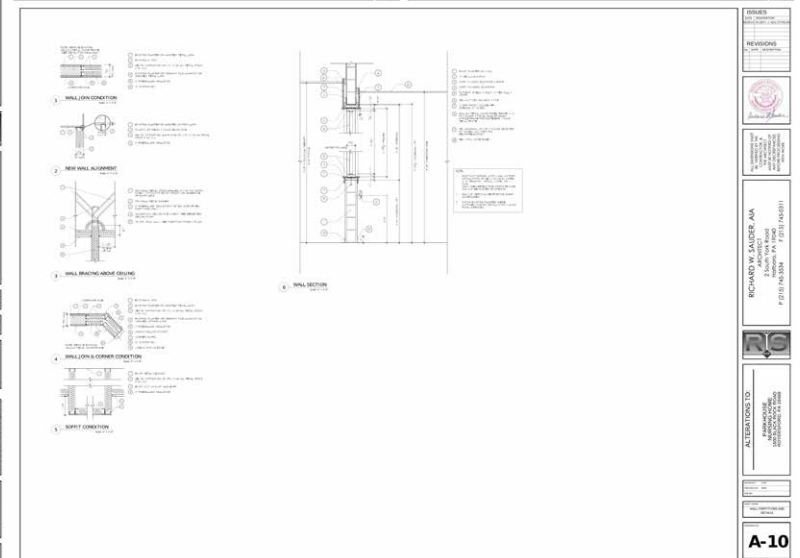
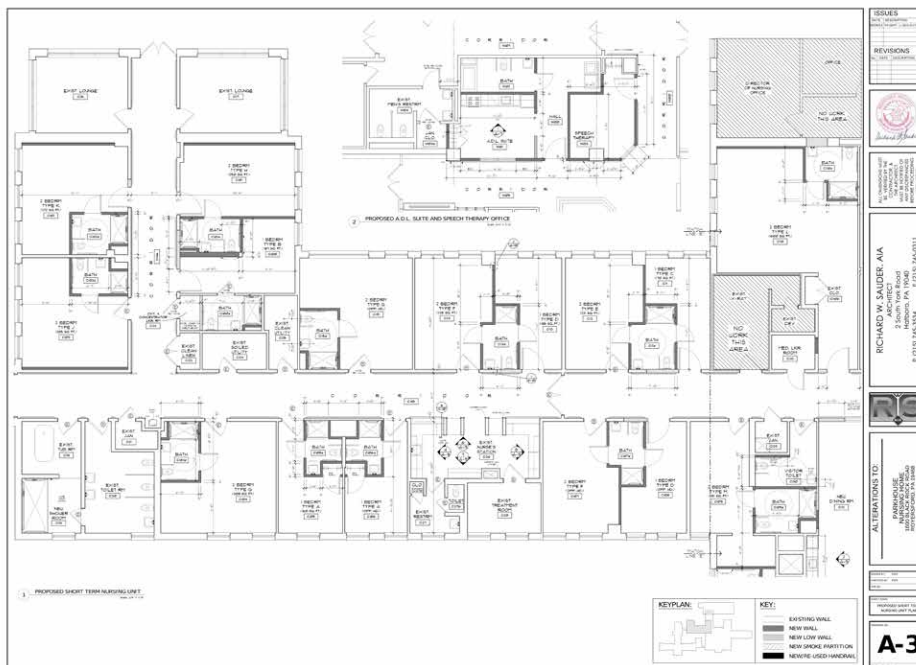


Ridge Flats - Onion Flats - Summer 2013  
May - August 2013

The firm Onion flats is located in Northern Liberties in Philadelphia; it is on the forefront of modern architecture and material use to help revamp areas of the town. Among their many ongoing projects I helped establish a base design for their facade system (the screen type facade seen in the two renderings to the left) at their modular, energy efficient, apartment complex near the East Falls Bridge, called Ridge Flats.

I helped with construction details, orthographic drawings, document setup, community outreach, material specification, and concept development up to schematic design.





## Parkhouse Nursing Home - Richard W. Sauder, AIA - Summer 2014 - May-Aug

Part of a major renovation for a county run nursing home, Parkhouse Nursing required major site surveying, material and structural inspection, close work with contractors, engineers, material providers and the clients. As the sole employee for a majority of the project, I created a working drawing set that helped our firm communicate between the various companies on the project and evaluate required demolitions, new material installation, phasing, and new to old detail connections. I personally helped design a new A.D.L suite, drew up details, confirmed the specifications were up to multiple levels of code, and coordinated between multiple firms for the project. As I left, the project has just cleared the state level of planning and was proceeding



